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WILDLIFE HABITAT RELATIONSHIPS OF EASTERN WASHINGTON (AREA 2)

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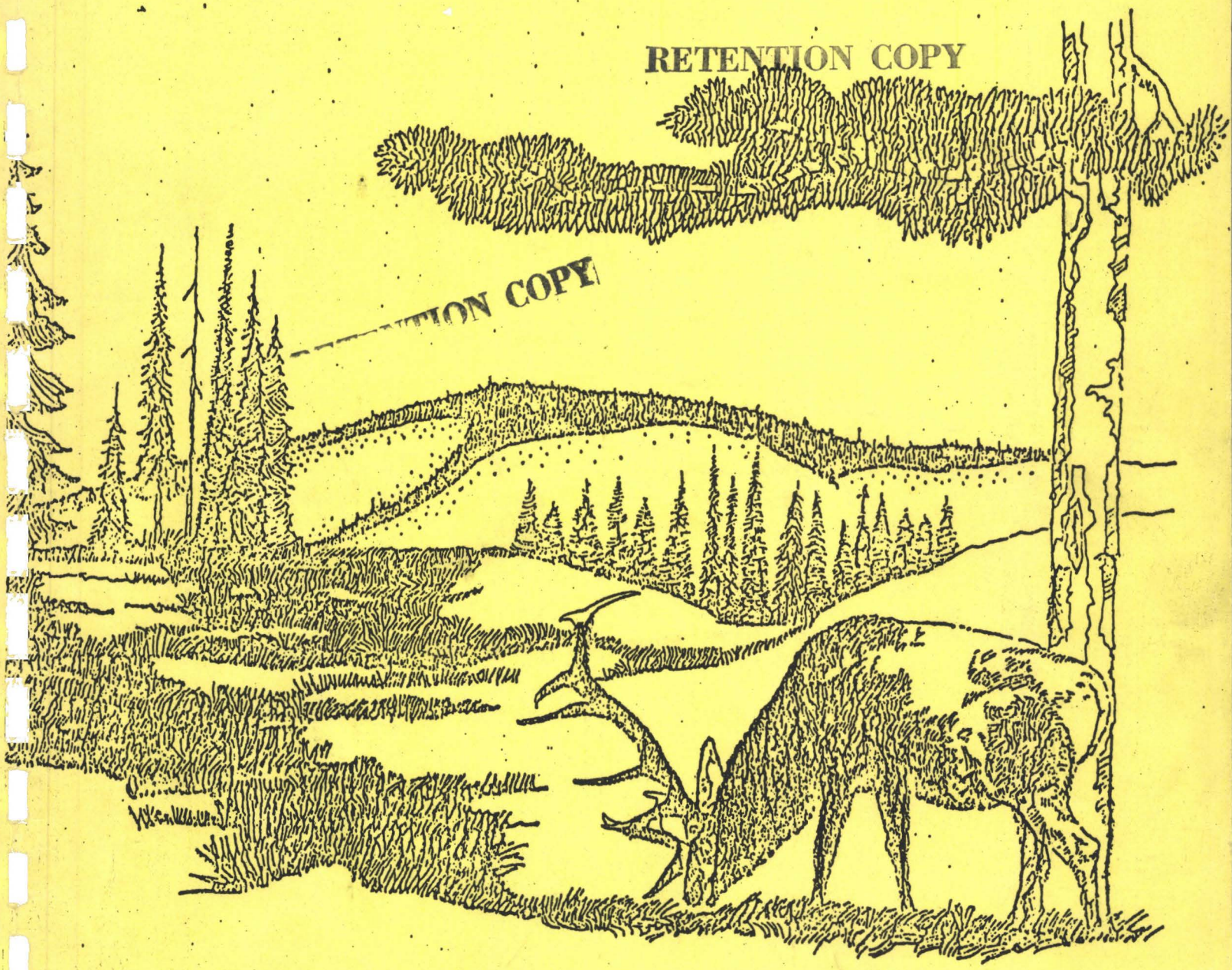

Prepared By
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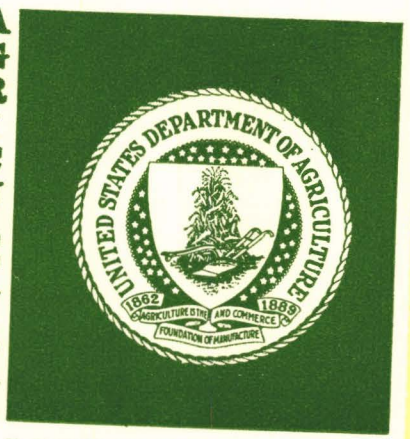

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WILDLIFE HABITAT RELATIONSHIPS OF EASTERN WASHINGTON (AREA 2)

Section One - Relationship of all Wildlife to Plant Communities and Successional Stages.

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WILDLIFE HABITAT RELATIONSHIPS OF EASTERN WASHINGTON (AREA 2)

Section 1 - Relationship of all wildlife to plant communities and successional stages.

Explanation:

The attached material has been assembled for review, critique and testing for application in coordination of wildlife with other forest management activities and planning.

Life Forms:

All species known to feed and reproduce in Area 2 have been grouped into one of 16 different life forms, based on their general feeding and reproducing habitat requirements. For each life form the following figures are provided:

Figure 1 - Relative degree of use by life form to plant communities and successional stages -- This is a very general display of the relative importance of each plant community and successional stage to the life form as a whole.

Figure 2 - Species orientation to plant communities -- This figure indicates those plant communities used significantly (more than 40 percent) for either feeding or reproduction. Information from this was used for figures 1 and 5.

Figure 3 - Species orientation to successional stages -- This figure indicates those vegetative successional stages used significantly (more than 40 percent) for either feeding or reproduction. Information from this was used for figures 1 and 5.

Figure 4 - Special orientation to unique and special habitat components -- Those species within life forms 2, 3, 4, and 16 are dependent upon unique and special habitat components in addition to certain successional stages of certain plant communities. For these life forms this figure was used to derive figure 5.

Figure 5 - Vulnerability ratings of species -- This figure summarizes the data from figures 2, 3, and 4 and gives a general indication of the vulnerability of each species within the life form. The fewer successional stages, plant communities, or unique-special habitat components used, the more vulnerable the species is to habitat manipulation. The vulnerability rating is relative within the particular life form and between different life forms.

Appendix 1 - Common and Scientific Nomenclature.

Appendix 2 - Status Classification System.

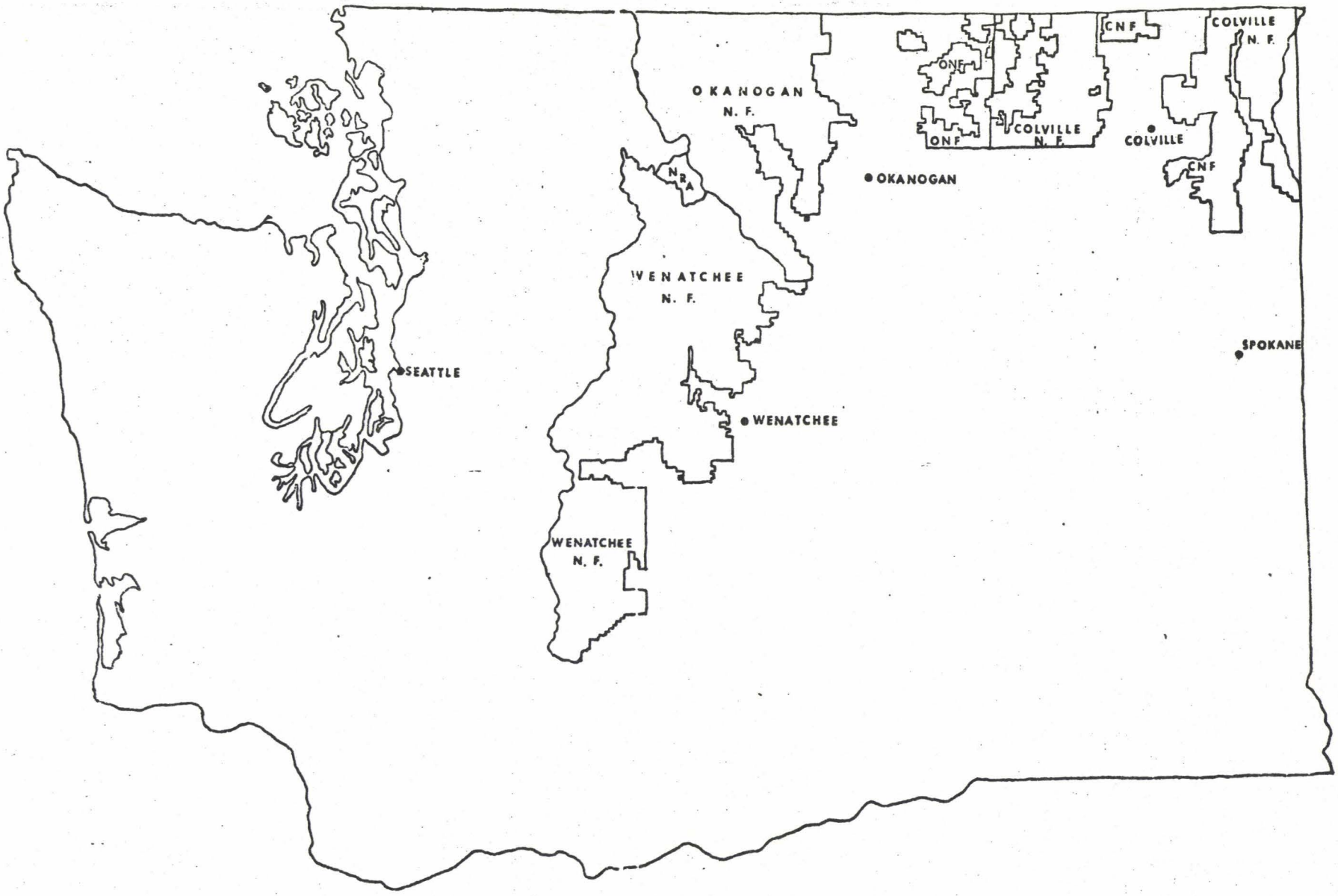
This appendix calls attention to certain species that have been considered as somewhat significant in various publications.

Appendix 3 - Composite Species Occurence and Orientation.

This is basically a summary of all information shown on the 16 Life Form Figures. This also contains information on reproductive capacity, home territories, and minimum habitat requirements.

Acknowledgement:

This publication was compiled from Area 3 information and the references on pages 148 and 193. Gratitude is extended to Jack Thomas (LaGrande Wildlife Lab.) and Rod Miller (Wildlife Staff, Willowa-Whitman) for their motivating discussions that resulted in this compilation. The principal work was accomplished by Merle Wischnofske, Cynthia West, Ralph Holtby, Tom Burke (Forest Biologists), John Musser, Roger McKeel, (Biologists, Washington Department of Game), and John Schoen (University of Washington).



VICINITY MAP OF NATIONAL FORESTS IN AREA 2

LIFE FORM DEFINITIONS

Life Form 1: **Reproduces in the water and feeds in the water.**

Life Form 2: Reproduces in the water and feeds on the ground, in bushes, or in trees.

Life Form 3: Reproduces on the ground around water, feeds on the ground, in bushes or in water.

Life Form 4: Reproduces on or in cliffs, caves, rim and talus slopes, feeds on the ground or in the air.

Life Form 5: Reproduces on the ground, without specific water, cliff, rim or talus association, and feeds on the ground.

Life Form 6: Reproduces on the ground, feeds in bushes and trees or in the air.

Life Form 7: Nests in bushes, feeds on the ground, in water and in the air.

Life Form 8: Nests in bushes, feeds in trees and bushes or in the air.

Life Form 9: Nests primarily in deciduous trees, feeds, in trees and bushes.

Life Form 10: Nests primarily in conifers, feeds in trees and bushes, or in the air.

Life Form 11: Nests in conifers or deciduous trees and feeds in trees or bushes, on the ground or in the air.

Life Form 12: Nests on very thick branches, feeds on the ground - or in water.

Life Form 13: Excavates own hole feeds in trees, brush, or air.

Life Form 14: Nests in a hole made by another species or in a naturally occurring hole - feeds on the ground, in water, or in the air.

Life Form 15: Reproduces in a burrow (underground) and feeds on or under the ground.

Life Form 16: Reproduces in a burrow (underground) and feeds in the air or in the water.

Figure 4. Species Orientation to Unique and Special Habitat Components

Life Form 1

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Rivers	Streams	Sloughs	Lakes	Reservoirs (>2 ac.)	Ponds (<2 ac.)	Intermittent Ponds, BOGS	Marshes: Large	Marshes: Small	Marshes: Tule	Marshes: Sedge	Marshes: Deciduous	Cliff	Cave	Rims	Talus	SNAGS	DOWN MATERIAL	No. of unique and/or special habitat components USED: Reproducing	No. of unique and/or special habitat components USED: Feeding
TAGR	ROUGH-SKINNED NEWT		XO		XO	XO	XO												0	4	5
RACAT	BULLFROG		XO		XO	XO	XO		XO	XO	XO	XO	XO							9	9
No. of species using unique-special habitat components	Reproducing	0	2	0	2	2	2	0	1	1	1	1	1	0	0	0	0	0	0		
	Feeding	0	2	0	2	2	2	0	1	1	1	1	1	0	0	0	0	0	1		

Figure 1 Relative Degree of Use by the Life Form to Indicated Plant Communities and Successional Stages

Life Form No. 2

NOTE: Only those species known to reproduce in Area 2 are shown on the various life form tables.

Total number in life form equals 11 species.

Reproduction Orientation ■■■■

Feeding Orientation XXXXXX

PLANT COMMUNITY	DRY MEADOW	MOIST MEADOW	OTHER GRASS DOMINANT	SAGE-BITTER BRUSH DOMINANT	OTHER BRUSH & SHRUB DOMINANT	Douglas-Fir Dominant	Hemlock-Cedar	ASPEN	RIPARIAN-DECIDUOUS	PONDEROSA PINE	MIXED CONIFER	True FIR	LODGEPOLE PINE	SUB-ALPINE Species	ALPINE MEADOW	
SUCCESSIONAL STAGES 1/	R F 2 2	R F 8 8	R F 2 2	R F 3 3	R F 5 5	R F 4 4	R F 5 5	R F 5 5	R F 9 9	R F 3 3	R F 5 5	R F 5 5	R F 3 3	R F 4 4	R F 1 1	NUMBER OF SPECIES REPRODUCING & FEEDING
OLD (160 + years)						2 2	2 2	NATURAL ROTATION AGE		1 1	3 3	3 3	NATURAL ROTATION AGE	2 2	CLIMAX SUCCESSIONAL STAGES	
MATURE (80 - 159 years)						2 2	2 2	1 1	3 3	1 1	3 3	3 3		2 2		
YOUNG (40 - 79 years)	CLIMAX SUCCESSIONAL STAGES					2 2	2 2	3 3	5 5	2 2	3 3	3 3	2 2	2 2		
POLE - SAPLING (11 - 39 years)						3 3	3 3	3 3	5 5	3 3	4 4	4 4	3 3	3 3		
BRUSH - SEEDLING (0 - 10 years)				3 3	5 5	3 3	3 3	4 4	4 4	2 2	2 2	2 2	2 2	2 2		
GRASS - FORB	2 2	8 8	2 2	3 3	5 5	3 3	4 4	5 5		3 3	3 3	3 3	2 2	3 3	1 1	

NOTE: Low use of a certain successional stage of a plant community indicates low use of that stage by the life form as a whole. A particular species within the life form may be highly dependent on that one stage. For more detail see Figures 2 and 3.

The number above each ba indicates number of species using this successional stage within this plant community.

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Figure 2. Species Orientation to Plant Communities

Life Form 2

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Dry Meadow	Moist Meadow	Other Grass Dominant	Sage-bitterbrush dominant	Other Brush & Shrub Dom	Douglas-Fir Dom.	Hemlock-Cedar	Aspen	Riparian Deciduous	Ponderosa Pine	Mixed Conifer	True Fir	Lodgepole Pine	Subalpine Species	Alpine Meadow	Number of plant Communities USED: Reproduction	Feeding
AMTI	Tiger Salamander		XO							XO							2	2
AMGR	NORTHWESTERN SALAMANDER		XO			XO			XO	XO							4	4
AMMA	Long-toed Salamander		XO			XO			XO	XO							4	4
DIEN	PACIFIC GIANT SALAMANDER						XO	XO				XO	XO				4	4
ASTR	Tailed Frog									XO		XO	XO	XO	XO		5	5
SCIN	Great Basin Spadefoot Toad	XO		XO	XO	XO				XO							5	5
BUBO	Western Toad		XO		XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO		12	12
HYRE	Pacific Tree Frog	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO		14	14
RAPR	Spotted Frog		XO				XO	XO	XO	XO	XO	XO	XO				8	8
RACA	CASCADE FROG		XO					XO							XO	XO	4	4
RAPI	Leopard Frog		XO							XO							2	2
Number of species using plant community	Reproduction	2	8	2	3	5	4	5	5	9	3	5	5	3	4	1		
	Feeding	2	8	2	3	5	4	5	5	9	3	5	5	3	4	1		

Figure 3. Species Orientation to Successional Stages

Life Form 2

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Grass-Forb	Brush-Seedling (0-10 yrs.)	Pole-Sapling (11-39 yrs.)	Young (40-79 yrs.)	Mature (80-159 yrs.)	Old (160+ years)	Number of Successional Stages USED	
								Reproduction	Feeding
AMTI	Tiger Salamander	XO						1	1
AMGR	NORTHWESTERN SALAMANDER	XO	XO					2	2
AMMA	Long-toed Salamander	XO			XO			2	2
DIEN	PACIFIC GIANT SALAMANDER					XO	XO	2	2
ASTR	Tailed Frog			XO	XO	XO	XO	4	4
SCIN	Great Basin Spadefoot Toad	XO	XO	XO	XO	XO	XO	6	6
BUBO	Western Toad	XO	XO	XO				3	3
HYRE	Pacific Tree Frog	XO	XO	XO	XO	XO	XO	6	6
RAPR	Spotted Frog	XO		XO	XO			3	3
RACA	CASCADE FROG	XO	XO					2	2
RAPI	Leopard Frog	XO						1	1
Number of species using successional stage	Reproduction	9	5	5	5	4	4		
	Feeding	9	5	5	5	4	4		

Figure 4. Species Orientation to Unique and Special Habitat Components

Life Form 2

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Rivers	Streams	Sloughs	Lakes	Reservoirs (>2 ac.)	Ponds (<2 ac.)	Intermittent Ponds, BOGS	Marshes: Large	Marshes: Small	Marshes: Tule	Marshes: Sedge	Marshes: Deciduous	Cliff	Cave	Rims	Talus	SNAGS	DOWN MATERIAL	No. of unique and/or special habitat components USED: Reproducing	No. of unique and/or special habitat components USED: Feeding
AMTI	Tiger Salamander			XO		XO	XO												0	3	4
AMGR	NORTHWESTERN SALAMANDER		XO		XO	XO	XO	XO	XO	XO	XO	XO	XO						0	10	11
AMMA	Long-toed Salamander		XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO						0	11	12
DIEN	PACIFIC GIANT SALAMANDER		XO		XO														0	2	3
ASTR	Tailed Frog		XO																	1	1
SCIN	Great Basin Spadefoot Toad			XO			XO	XO												3	3
BUBO	Western Toad	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO							12	12
HYRE	Pacific Tree Frog	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO						0	13	14
RAPR	Spotted Frog	XO	XO		XO	XO	XO													5	5
RACA	CASCADE FROG		XO		XO		XO	XO	XO	XO	XO	XO	XO						0	9	10
RAPI	Leopard Frog	XO	XO	XO		XO	XO													5	5
No. of species using unique-Special habitat components	Reproducing	4	9	6	7	7	9	6	5	5	5	5	5	0	0	0	0	0	0		
	Feeding	4	9	6	7	7	9	6	5	5	5	5	5	0	0	0	0	0	6		

FIGURE 5. Vulnerability Ratings of Species

Life Form 2. (Reproduces in the water and feeds on the ground, in bushes, or in trees.)

Note: Life forms 2, 3, 4 and 16 also depend on Unique Habitat components which are reflected below.

Letter Code	Species	Reproductive Orientation 1/ No. of Successional Stages Used (1)	Reproductive Orientation No. of Plant Communities Used (2)	Reproductive Orientation Columns 1+2 / 2 (3)	Feeding Orientation No. of Successional Stages Used (4)	Feeding Orientation No. of Plant Communities Used (5)	Feeding Orientation Columns 4 + 5 (6)	Feeding Orientation Columns 3 + 6 (7)	Feeding Orientation No. of Unique Components Subtracted from 13 (8) 4/	Vulnerability Score 2/ Columns 7-8 (9)	Vulnerability Rating 3/ High -12 to +3	Med. +3 to +18	Lo +18 +3
AMTI	Tiger Salamander	1	2	1.5	1	2	3	4.5	(4) 10	-5.5			
AMGR	NORTHWESTERN SALAMANDER	2	4	3.0	2	4	6	9.0	(11) 3	+6.0			
AMMA	Long-toed Salamander	2	4	3.0	2	4	6	9.0	(11) 2	+7.0			
DIEN	PACIFIC GIANT SALAMANDER	2	4	3.0	2	4	6	9.0	(3) 2	+7.0			
ASTR	Tailed Frog	4	5	4.5	4	5	9	13.5	(1) 12	+1.5			
SCIN	Great-Basin Spadefoot Toad	6	5	5.5	6	5	11	16.5	(3) 10	+6.5			
BUBO	Western Toad	3	12	7.5	3	12	15	22.5	(12) 1	+21.5			
HYRE	Pacific Tree Frog	6	14	10.0	6	14	20	30.0	(12) 1	+29.0			
RAPR	Spotted Frog	3	8	5.5	3	8	11	16.5	(5) 8	+8.5			
RACA	CASCADE FROG	2	4	3.0	2	4	6	9.0	(10) 4	+5.0			
RAPI	Leopard Frog	1	2	1.5	1	2	3	4.5	(3) 10	-5.5			

1/ Reproductive orientation is weighed doubly to the feeding orientation; this is done by dividing the sum of columns 1 and 2 by 2. The results are shown in column 3.

2/ Vulnerabillty score is derived by subtracting column 8 from column 7.

3/ Species of special interest shown (rated) in Appendix 1.

4/ This gives the inverted value of each number in range from one to twelve. (Twelve is the highest number of unique or special habitat components used by any single species.) Numbers in parenthesis is number of unique components used for feeding.

Figure 1 Relative Degree of Use by the Life Form to Indicated Plant Communities and Successional Stages

Life Form No. 3

NOTE: Only those species known to reproduce in Area 2 are shown on the various life form tables.

Total number in life form equals 45 species.

Reproduction Orientation ▬▬

Feeding Orientation XXXXXX

PLANT COMMUNITY	DRY MEADOW	MOIST MEADOW	OTHER GRASS DOMINANT	SAGE-BITTER BRUSH DOMINANT	OTHER BRUSH & SHRUB DOMINANT	Douglas-Fir Dominant	Hemlock-Cedar	ASPEN	RIPARIAN-DECIDUOUS	PONDEROSA PINE	MIXED CONIFER	True FIR	LODGEPOLE PINE	SUB-ALPINE Species	ALPINE MEADOW
SUCCESSIONAL STAGES 1/	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F
	7 18	24 32	12 23	5 4	4 5	2 2	2 1	3 5	30 37	6 6	7 7	6 5	5 4	4 3	3 3
OLD (160 + years)						2 2	2 2	NATURAL ROTATION AGE		5 5	7 6	6 5	NATURAL ROTATION AGE	4 3	CLIMAX SUCCESSIONAL STAGES
MATURE (80 - 159 years)						2 2	2 2	3 3	14 17	6 6	7 6	6 5		4 3	
YOUNG (40 - 79 years)	CLIMAX SUCCESSIONAL STAGES					2 2	2 2	3 3	14 15	4 4	5 4	4 3	3 2	2 1	
POLE - SAPLING (11 - 39 years)						2 2	2 2	3 3	15 15	4 4	4 4	3 3	2 2	1 1	
BRUSH - SEEDLING (0 - 10 years)				5 4	3 5	2 2	2 2	3 5	23 28	6 6	4 7	3 5	2 4	1 3	
GRASS - FORB	7 18	24 31	12 23	4 3	2 5	2 2	2 2	2 4	25 35	5 5	4 5	4 4	3 3	2 2	3 3

NOTE: Low use of a certain successional stage of a plant community indicates low use of that stage by the life form as a whole. A particular species within the life form may be highly dependent on that one stage. For more detail see Figures 2 and 3.

The number above each ba indicates number of species using this successional stage within this plant community.

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Figure 2. Species Orientation to Plant Communities

Life Form 3

X = Reproduction 0 = Feeding

SPECIES CODE	COMMON NAME	Dry Meadow	Moist Meadow	Other Grass Dominant	Sage-bitterbrush dominant	Other Brush & Shrub Dom.	Douglas-Fir Dom.	Hemlock-Cedar	Aspen	Riparian Deciduous	Ponderosa Pine	Mixed Conifer	TRUE Fir	Lodgepole Pine	Subalpine Species	Alpine Meadow	Number of plant Communities USED: Reproduction	Feeding
CHPI	Painted Turtle									X							1	0
EUSK	Western Skink				X O	X O			XO	XO	XO						5	5
DIPU	WESTERN RINGNECK SNAKE	XO		XO		XO			XO	XO	XO	XO					7	7
THSI	Common Garter Snake	XO	XO	XO		XO	XO	XO	XO	XO	XO	XO	XO	XO			12	12
GAIM	COMMON LOON									X							1	0
POGR	RED-NECKED GREBE									X							1	0
PONI	Eared Grebe									XO							1	1
AEOC	WESTERN GREBE									X							1	0
POPO	Pied-billed Grebe									X							1	0
PHAU	Double-crested Cormorant		X							X							2	0
BOLE	American Bittern		XO							XO							2	2
BRCA	Canada Goose	O	XO	O						XO							2	4
ANPL	Mallard	O	XO	O						XO							2	4
ANST	Gadwall		XO	O						XO							2	3
ANAC	Pintail	O	XO	O						XO							2	4
Number of species using plant community	Reproduction																	
	Feeding																	

01

Figure 2. Species Orientation to Plant Communities

Life Form 3

X = Reproduction 0 = Feeding

SPECIES CODE	COMMON NAME	Dry Meadow	Moist Meadow	Other Grass Dominant	Sage-bitterbrush dominant	Other Brush & Shrub Dom.	Douglas-Fir Dom.	Hemlock-Cedar	Aspen	Riparian Deciduous	Ponderosa Pine	Mixed Conifer	True Fir	Lodgepole Pine	Subalpine Species	Alpine Meadow	Number of plant Communities USED: Reproduction	Feeding
ANCR	Green-winged Teal	O	XO	O						XO							2	4
ANDI	Blue-winged Teal		XO	O						O							1	3
ANCY	Cinnamon Teal		XO	O													1	2
MAAM	American Wigeon	O	XO	O						XO							2	4
ANCL	Northern Shoveler	O	XO	O						O							1	4
AYAM	Redhead		XO							O							1	2
AYCO	Ring-necked Duck	O	XO	O						XO							2	4
AYAF	Lesser Scaup	O	XO	O						XO							2	4
HIHI	Harlequin Duck			O						O		X	X	X	X		4	2
OXJA	Ruddy Duck		XO							O							1	2
RALI	Virginia Rail		O							XO							1	2
POCA	Sora									XO							1	1
FUAM	American Coot	O	O	O		XO				XO							2	5
Number of species using plant community	Reproduction																	
	Feeding																	

Figure 2. Species Orientation to Plant Communities

Life Form 3

X = Reproduction 0 = Feeding

SPECIES CODE	COMMON NAME	Dry Meadow	Moist Meadow	Other Grass Dominant	Sage-bitterbrush dominant	Other Brush & Shrub Dom	Douglas-Fir Dom.	Hemlock-Cedar	Aspen	Riparian Deciduous	Ponderosa Pine	Mixed Conifer	True Fir	Lodgepole Pine	Subalpine Species	Alpine Meadow	Number of plant Communities USED	
																	Reproduction	Feeding
CHVO	Killdeer	XO	XO	XO						XO							4	4
CAGA	Common Snipe		XO	XO						XO							3	3
NUAM	Long-billed Curlew	O	O	XO	XO					O							2	5
ACMA	Spotted Sandpiper		XO							XO						XO	3	3
REAM	American Avocet	O	XO	XO						XO							3	4
STTR	Wilson's Phalarope		XO														1	1
LACA	California Gull	XO	O	XO	XO				O	O							3	6
LADE	Ring-billed Gull	XO	O	XO	XO				O	O							3	6
Number of species using plant community	Reproduction																	
	Feeding																	

Figure 2. Species Orientation to Plant Communities

Life Form 3

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Dry Meadow	Moist Meadow	Other Grass Dominant	Sage-bitterbrush dominant	Other Brush & Shrub Dom.	Douglas-Fir Dom.	Hemlock-Cedar	Aspen	Riparian Deciduous	Ponderosa Pine	Mixed Conifer	TRUE Fir	Lodgepole Pine	Subalpine Species	Alpine Meadow	Number of plant Communities USED: Reproduction	Feeding
STFO	Forster's Tern	XO	O	X	X					O							3	3
CHNI	Black Tern	XO	O	X						O							2	3
CIME	Dipper						XO	XO		XO	XO	XO	XO				6	6
TRTR	Winter Wren									O		XO	XO	XO	XO		4	5
CIPA	Long-billed Marsh Wren		XO							XO							2	2
SENO	Northern Waterthrush		O			O				XO		O					1	4
GETR	Common Yellowthroat		O							XO							1	2
ZAPR	Western Jumping Mouse		XO	XO						O	XO	XO	XO	XO	XO	XO	8	9
ZATR	PACIFIC JUMPING MOUSE		XO	XO						O	XO	XO	XO	XO	XO	XO	8	9
Number of species using plant community	Reproduction	7	24	12	5	4	2	2	3	30	6	7	6	5	4	3		
	Feeding	18	32	23	4	5	2	2	5	37	6	7	5	4	3	3		

Figure 3. Species Orientation to Successional Stages

Life Form 3

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Grass-Forb	Brush-Seedling (0-10 yrs.)	Pole-Sapling (11-39 yrs.)	Young (40-79 yrs.)	Mature (80-159 yrs.)	Old (160+ years)	Number of Successional Stages USED: Reproduction	Number of Successional Stages USED: Feeding
CHPI	Painted Turtle	X	X	X	X	X		5	0
EUSK	Western Skink	X O	X O	X O	X O	X O		5	5
DIPU	WESTERN RINGNECK SNAKE		X O	X O	X O	X O	X O	5	5
THSI	Common Garter Snake	X O	X O	X O	X O	X O	X O	6	6
GAIM	COMMON LOON	X	X					2	0
POGR	RED-NECKED GREBE	X	X					2	0
PONI	Eared Grebe	X O						1	1
AEOC	WESTERN GREBE	X	X					2	0
POPO	Pied-billed Grebe	X O						1	1
PHAU	Double-crested Cormorant	X O						1	1
BOLE	American Bittern	X O	X O					2	2
BRCA	Canada Goose	X O	X O	X O	X O	X O		5	5
ANPL	Mallard	X O	X O	X O	X O	X O		5	5
ANST	Gadwall	X O	X O	X O	X O	X O		5	5
ANAC	Pintail	X O	X O					2	2
Number of species using successional stage	Reproduction								
	Feeding								

Figure 3. Species Orientation to Successional Stages

Life Form 3

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Grass-Forb	Brush-Seedling (0-10 yrs.)	Pole-Sapling (11-39 yrs.)	Young (40-79 yrs.)	Mature (80-159 yrs.)	Old (160+ years)	Number of Successional Stages USED	
								Reproduction	Feeding
ANCR	Green-winged Teal	X O	X O	X O	X O	X O		5	5
ANDI	Blue-winged Teal	X O						1	1
ANCY	Cinnamon Teal	X O						1	1
MAAM	American Wigeon	X O	X O	X O	X O	X O		5	5
ANCL	Northern Shoveler	X O						1	1
AYAM	Redhead	X O						1	1
AYCO	Ring-necked Duck	X O	X O	X O	X O	X O		5	5
AYAF	Lesser Scaup	X O	X O					2	2
HIHI	Harlequin Duck	O	O	O	X O	X O	X O	3	6
OXJA	Ruddy Duck	X O						1	1
RALI	Virginia Rail	O	X O	X O	X O	X O		4	5
POCA	Sora		X O	X O	X O	X O		4	4
FUAM	American Coot	O	X O	X O	X O	X O		4	5
Number of species using successional stage	Reproduction								
	Feeding								

Figure 3. Species Orientation to Successional Stages

Life Form 3

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Grass-Forb	Brush-Seedling (0-10 yrs.)	Pole-Sapling (11-39 yrs.)	Young (40-79 yrs.)	Mature (80-159 yrs.)	Old (160+ years)	Number of Successional Stages USED: Reproduction	Number of Successional Stages USED: Feeding
CHVO	Killdeer	X O						1	1
CAGA	Common Snipe	X O						1	1
NUAM	Long-billed Curlew	X O	X O					2	2
ACMA	Spotted Sandpiper	X O						1	1
REAM	American Avocet	X O						1	1
STTR	Wilson's Phalarope	X O						1	1
LACA	California Gull	X O	X O					2	2
LADE	Ring-billed Gull	X O	X O					2	2
Number of species using successional stage	Reproduction								
	Feeding								

Figure 3. Species Orientation to Successional Stages

Life Form 3

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Grass-Forb	Brush-Seedling (0-10 yrs.)	Pole-Sapling (11-39 yrs.)	Young (40-79 yrs.)	Mature (80-159 yrs.)	Old (160+ years)	Number of Successional Stages USED	
								Reproduction	Feeding
STFO	Forster's Tern	X O	X O					2	2
CHNI	Black Tern	X O						1	1
CIME	Dipper	X O	X O	X O	X O	X O	X O	6	6
TRTR	Winter Wren		X O	X O	X O	X O	X O	5	5
CIPA	Long-billed Marsh Wren	X O	X O					2	2
SENO	Northern Waterthrush	X O	X O					2	2
GETR	Common Yellowthroat	O	X O					1	2
ZAPR	Western Jumping Mouse	X O	O			X O	X O	3	4
ZATR	PACIFIC JUMPING MOUSE	X O	O			X O	X O	3	4
Number of species using successional stage	Reproduction	38	28	15	16	18	7		
	Feeding	38	27	15	15	17	7		

Figure 4. Species Orientation to Unique and Special Habitat Components

Life Form 3

X = Reproduction O = Feeding

SPECIES																					No. of unique and/or special habitat components USED	
CODE	COMMON NAME	Rivers	Streams	Sloughs	Lakes	Reservoirs (>2 ac.)	Ponds (<2 ac.)	Intermittent Ponds, BOGS	Marshes: Large	Marshes: Small	Marshes: Tule	Marshes: Sedge	Marshes: Deciduous	Cliff	Cave	Rims	Talus	SNAGS	DOWN MATERIAL	Reproducing	Feeding
CHPI	Painted Turtle	XO		XO		XO	XO	O											O	4	6
EUSK	Western Skink	XO	XO			XO	XO												O	4	5
DIPU	WESTERN RINGNECK SNAKE	XO	XO		XO	XO	XO						XO						XO	7	7
THSI	Common Garter Snake	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO						XO	13	13
GAIM	COMMON LOON				XO	XO														2	2
POGR	RED-NECKED GREBE			O	XO	XO														2	3
PONI	Eared Grebe	XO		XO	XO	XO			XO		XO	XO								7	7
AEOC	WESTERN GREBE				XO	XO														2	2
POPO	Pied-billed Grebe	O		XO	O	O	XO		XO	XO	XO	XO								6	9
PHAU	Double-crested Cormorant	XO		O	O	XO								X						3	4
BOLE	American Bittern	O	O	O	O	O			XO		XO	XO	XO							4	9
BRCA	Canada Goose	XO		XO	XO	XO			XO		XO	XO								7	7
ANPL	Mallard	XO	XO	XO	XO	XO	XO	O	XO	XO	XO	XO								10	11
No. of species using unique-special habitat components	Reproducing																				
	Feeding																				

Figure 4. Species Orientation to Unique and Special Habitat Components

Life Form 3

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Rivers	Streams	Sloughs	Lakes	Reservoirs (>2 ac.)	Ponds (<2 ac.)	Intermittent Ponds, Bogs	Marshes: Large	Marshes: Small	Marshes: Tule	Marshes: Sedge	Marshes: Deciduous	Cliff	Cave	Rims	Talus	SNAGS	DOWN MATERIAL	No. of unique and/or special habitat components USED: Reproducing	No. of unique and/or special habitat components USED: Feeding
ANST	Gadwall				XO	XO			XO		XO	XO	XO							6	6
ANAC	Pintail	XO		XO	XO	XO			XO		XO	XO								7	7
ANCR	Green-winged Teal	XO	O	XO	XO	XO	XO	O	XO	O	XO	XO	O							8	12
ANDI	Blue-winged Teal	O		O	O	O	XO			XO	XO	XO								4	8
ANCY	Cinnamon Teal	O		XO	O	XO	XO	O	O	XO	XO	XO								6	10
MAAM	American Wigeon	XO	O	XO	XO	XO	XO	O	XO	XO	XO	XO	XO							10	12
ANCL	Northern Shoveler	O		XO	XO	XO	O	O	XO	O	XO	XO								6	10
AYAM	Redhead	O		XO	XO	XO			XO		XO	XO								6	7
AYCO	Ring-necked Duck	XO	O	XO	XO	XO	O	O	XO	O	XO	XO	XO							8	12
AYAF	Lesser Scaup	XO	O	XO	XO	XO	O	O	XO	O	XO	XO								7	11
HIHI	Harlequin Duck	XO	XO																X	3	2
OXJA	Ruddy Duck			O	O	O			XO	XO	XO	XO								4	7
RALI	Virginia Rail	XO		XO					XO	XO			XO							5	5
No. of species using unique-special habitat components	Reproducing																				
	Feeding																				

Figure 4. Species Orientation to Unique and Special Habitat Components

Life Form 3

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Rivers	Streams	Sloughs	Lakes	Reservoirs (>2 ac.)	Ponds (<2 ac.)	Intermittent Ponds, BOGS	Marshes: Large	Marshes: Small	Marshes: Tule	Marshes: Sedge	Marshes: Deciduous	Cliff	Cave	Rims	Talus	SNAGS	DOWN MATERIAL	No. of unique and/or special habitat components USED: Reproducing	No. of unique and/or special habitat components USED: Feeding
POCA	Sora	XO	XO	XO					XO	XO			XO							6	6
FUAM	American Coot	XO	XO	XO	XO	XO	O		XO	XO	XO	XO	XO							10	11
CHVO	Killdeer	XO	XO	O	XO	XO	XO	O												5	7
CAGA	Common Snipe	O	O	O	O	O	O		XO	XO		XO								3	9
NUAM	Long-billed Curlew	O		O	O	O	O	O	O	O		O								0	9
ACMA	Spotted Sandpiper	XO	XO	XO	XO	XO	XO	O												6	7
REAM	American Avocet	XO		XO	XO	XO	XO	O	XO	O	O	XO								7	10
STTR	Wilson's Phalarope			O			XO			XO		XO								3	4
LACA	California Gull	XO	O	O	O	O			XO	O	XO	XO								4	9
LADE	Ring-billed Gull	XO	O	O	O	O			XO	O	XO	XO								4	9
No. of species using unique-Special habitat components	Reproducing																				
	Feeding																				

Figure 4. Species Orientation to Unique and Special Habitat Components

Life Form 3

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Rivers	Streams	Sloughs	Lakes	Reservoirs (>2 ac.)	Ponds (<2 ac.)	Intermittent Ponds, Bogs	Marshes: Large	Marshes: Small	Marshes: Tule	Marshes: Sedge	Marshes: Deciduous	Cliff	Cave	Rims	Talus	SNAGS	DOWN MATERIAL	No. of unique and/or special habitat components USED: Reproducing	No. of unique and/or special habitat components USED: Feeding
STFO	Forster's Tern	O		O	O	O	O		XO		XO	XO								3	8
CHNI	Black Tern	O		O	O	O	O		XO		XO	XO								3	8
CIME	Dipper	XO	XO											X		X				4	2
TRTR	Winter Wren	XO	XO																X	3	2
CIPA	Long-billed Marsh Wren								XO	XO	XO	XO								4	4
SENO	Northern Waterthrush	XO	XO	XO						XO			XO							5	5
GETR	Common Yellowthroat								XO	XO	XO		O							3	4
ZAPR	Western Jumping Mouse	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO								
ZATR	PACIFIC JUMPING MOUSE	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO			O			XO	13	14
																O			XO	13	14
No. of species using unique-Special habitat components	Reproducing	27	14	22	22	26	16	3	28	17	26	28	12	2	0	1	0	0	6		
	Feeding	37	22	35	34	36	24	15	30	24	27	29	14	0	0	2	0	0	6		

FIGURE 5. Vulnerability Ratings of Species

Life Form 3. (Reproduces on the ground around water, feeds on the ground, in bushes, or in water.)

Note: Life forms 2, 3, 4 and 16 also depend on Unique Habitat components which are reflected below.

Letter Code	Species	Reproductive Orientation 1/ No. of Successional Stages Used (1)	Reproductive Orientation 1/ No. of Plant Communities Used (2)	Reproductive Orientation 1/ Columns 1+2 / 2 (3)	Feeding Orientation No. of Successional Stages Used (4)	Feeding Orientation No. of Plant Communities Used (5)	Feeding Orientation Columns 4 + 5 (6)	Feeding Orientation Columns 3 + 6 (7)	No. of Unique Components Subtracted from 13 (8) 4/	Vulnerability Score 2/ Columns 7-8 (9)	Vulnerability Rating 3/ High -12 to +3 / Med. +3 to +18 / Low +18 t +33
CHPI	Painted Turtle	5	1	3	0	0	0	3	(6) 9	-6.0	
EUSK	Western Skink	5	5	5	5	5	10	15	(5) 9	+6.0	
DIPU	WESTERN Ring-neck Snake	5	7	6	5	7	12	18	(7) 6	+12.0	
THSI	Common Garter Snake	6	10	8	6	10	16	24	(11) 2	+22.0	
GAIM	COMMON LOON	2	1	1.5	2	1	3	4.5	(2) 11	-7.5	
POGR	RED-NECKED GREBE	2	1	1.5	2	1	3	4.5	(3) 11	-7.5	
PONI	Eared Grebe	1	1	1	1	1	2	3	(7) 6	-3.0	
AEOC	WESTERN GREBE	2	1	1.5	2	1	3	4.5	(2) 11	-7.5	
POPO	Pied-billed Grebe	1	1	1	1	0	1	2	(9) 4	-2.0	
PHAU	Double-crested Cormorant	1	2	1.5	1	0	1	2.5	(4) 9	-6.5	
BOLE	American Bittern	2	2	2	2	2	4	6	(9) 4	+2.0	
BRCA	Canada Goose	5	2	3.5	5	4	9	12.5	(7) 6	+6.5	
ANPL	Mallard	5	2	3.5	5	4	9	12.5	(11) 2	+10.5	

1/ Reproductive orientation is weighed doubly to the feeding orientation; this is done by dividing the sum of columns 1 and 2 by 2. The results are shown in column 3.

2/ Vulnerabillty score is derived by subtracting column 8 from column 7.

3/ Species of special interest shown (rated) in Appendix 2.

4/ This gives the inverted value of each number in range from one to twelve. (Twelve is the highest number of unique or special habitat components used by any single species.) Number in parenthesis is number of unique components used for feeding.

FIGURE 5. Vulnerability Ratings of Species

Life Form 3.

Note: Life forms 2, 3, 4 and 16 also depend on Unique Habitat components which are reflected below.

Code	Species	Reproductive Orientation 1/ No. of Successional Stages Used (1)	Reproductive Orientation 1/ No. of Plant Communities Used (2)	Reproductive Orientation 1/ Columns 1+2 / 2 (3)	Feeding Orientation No. of Successional Stages Used (4)	Feeding Orientation No. of Plant Communities Used (5)	Feeding Orientation Columns 4 + 5 (6)	Feeding Orientation Columns 3 + 6 (7)	Feeding Orientation No. of Unique Components Subtracted from 13 (8) 4/	Vulnerability Score 2/ Columns 7-8 (9)	Vulnerability Rating 3/ High -12 to +3	Vulnerability Rating 3/ Med. +3 to +18	Vulnerability Rating 3/ Low +18 to +33
ANST	GADWALL	5	2	7	3.5	5	3	10	7	+3			
ANAC	PINTAIL	2	2	4	2	2	4	8	6	+2			
ANCR	GREEN-WINGED TEAL	5	2	7	3.5	5	4	11	5	+6			
ANDI	BLUE-WINGED TEAL	1	1	2	1	1	3	5	9	-4			
ANCY	CINNAMON TEAL	1	1	2	1	1	2	4	7	-3			
MAAM	AMERICAN WIGEON	5	2	7	3.5	5	4	11	3	+8			
ANCL	NORTHERN SHOVELER	1	1	2	1	1	4	6	7	-1			
AYAM	REDHEAD	1	1	2	1	1	2	4	7	-3			
AYCO	RING-NECKED DUCK	5	2	7	3.5	5	4	11	5	+6			
AYAF	LESSER SCAUP	2	2	4	2	2	4	8	6	+2			
HIHI	HARLEQUIN DUCK	3	4	7	3.5	6	2	9	10	-1			
OXJA	RUDDY DUCK	1	1	2	1	1	2	4	9	-5			

1/ Reproductive orientation is weighed doubly to the feeding orientation; this is done by dividing the sum of columns 1 and 2 by 2. The results are shown in column 3.

2/ Vulnerabillty score is derived by subtracting column 8 from column 7.

3/ Species of special interest shown (rated) in Appendix 2.

4/ This gives the inverted value of each number in range from one to twelve. (Twelve is the highest number of unique or special habitat components used by any single species.) Numbers in parenthesis is number of unique components used for feeding.

FIGURE 5. Vulnerability Ratings of Species

Life Form 3. (Reproduces on the ground around water, feeds on the ground, in bushes, or in water.)

Note: Life forms 2, 3, 4 and 16 also depend on Unique Habitat components which are reflected below.

Letter Code	Species	Reproductive Orientation 1/			Feeding Orientation					Vulnerability Score 2/ Columns 7-8 (9)	Vulnerability Rating 3/		
		No. of Successional Stages Used (1)	No. of Plant Communities Used (2)	Columns 1+2 / 2 (3)	No. of Successional Stages Used (4)	No. of Plant Communities Used (5)	Columns 4 + 5 (6)	Columns 3 + 6 (7)	No. of Unique Components Subtracted from 13 (8) 4/		High -12 to +3	Med. +3 to +18	Low +18 t +33
RALI	Virginia Rail	4	1	2.5	5	2	7	7.5	(5) 8	-0.5			
POCA	Sora	4	1	2.5	4	1	5	7.5	(6) 7	+0.5			
FUAM	American Coot	4	2	3.0	5	5	10	13.0	(11) 2	+11.0			
CHVO	Killdeer	1	4	2.5	1	4	5	7.5	(7) 6	+1.5			
CAGA	Common Snipe	1	3	2.0	1	3	4	6.0	(9) 4	+2.0			
NUAM	Long-billed Curlew	2	2	2.0	2	5	7	9.0	(9) 4	+5.0			
ACMA	Spotted Sandpiper	1	3	2.0	1	3	4	6.0	(7) 6	0.0			
REAM	American Avocet	1	3	2.0	1	4	5	7.0	(10) 3	+4.0			
STTR	Wilson's Phalarope	1	1	1.0	1	1	2	3.0	(4) 9	-6.0			
LACA	California Gull	2	3	2.5	2	6	8	10.5	(9) 4	+6.5			

1/ Reproductive orientation is weighed doubly to the feeding orientation; this is done by dividing the sum of columns 1 and 2 by 2. The results are shown in column 3.

2/ Vulnerabillty score is derived by subtracting column 8 from column 7.

3/ Species of special interest shown (rated) in Appendix 2.

4/ This gives the inverted value of each number in range from one to twelve. (Twelve is the highest number of unique or special habitat components used by any single species.) Number in parenthesis is number if unique components used for feeding.

FIGURE 5. Vulnerability Ratings of Species

Life Form 3 . (Reproduces on the ground around water, feeds on the ground, in bushes or in water.)

Note: Life forms 2, 3, 4 and 16 also depend on Unique Habitat components which are reflected below.

Letter Code	Species	Reproductive Orientation 1/			Feeding Orientation					Vulnerability Score 2/ Columns 7-8 (9)	Vulnerability Rating 3/		
		No. of Successional Stages Used (1)	No. of Plant Communities Used (2)	Columns 1+2 / 2 (3)	No. of Successional Stages Used (4)	No. of Plant Communities Used (5)	Columns 4 + 5 (6)	Columns 3 + 6 (7)	No. of Unique Components Subtracted from 13 (8) 4/		High -12 to +3	Med. +3 to +18	Low +18 t +33
LADE	Ring-billed Gull	2	3	2.5	2	6	8	10.5	(9) 4	+6.5			
STFO	Forster's Tern	2	3	2.5	2	3	5	7.5	(8) 5	+2.5			
CHNI	Black Tern	1	2	1.5	1	3	4	5.5	(8) 5	+0.5			
CIME	Dipper	6	6	6.0	6	6	12	18.0	(2) 9	+9.0			
TRTR	Winter Wren	5	4	4.5	5	5	10	14.5	(2) 11	+3.5			
TEPA	Long-billed Marsh Wren	2	2	2.0	2	2	4	6.0	(4) 9	-3.0			
SEMO	Northern Waterthrush	2	1	1.5	2	4	6	7.5	(5) 8	-0.5			
GETR	Common Yellowthroat	1	1	1.0	2	2	4	5.0	(4) 9	-4.0			
	Mammals												
ZAPR	Western Jumping Mouse	3	8	5.5	4	9	13	18.5	(13) 0	+18.5			
ZATR	PACIFIC JUMPING MOUSE	3	8	5.5	4	9	13	18.5	(14) 0	+18.5			

1/ Reproductive orientation is weighed doubly to the feeding orientation; this is done by dividing the sum of columns 1 and 2 by 2. The results are shown in column 3.

2/ Vulnerabillty score is derived by subtracting column 8 from column 7.

3/ Species of special interest shown (rated) in Appendix 2 .

4/ This gives the inverted value of each number in range from one to twelve. (Twelve is the highest number of unique or special habitat components used by any single species.) Number in parenthesis is number of unique components used for feeding.

Figure 1 Relative Degree of Use by the Life Form to Indicated Plant Communities and Successional Stages

Life Form No. 4

NOTE: Only those species known to reproduce in Area 2 are shown on the various life form tables.

Total number in life form equals 31 species.

Reproduction Orientation

Feeding Orientation XXXXXX

PLANT COMMUNITY / SUCCESSIONAL STAGES 1/	DRY MEADOW	MOIST MEADOW	OTHER GRASS DOMINANT	SAGE-BITTER BRUSH DOMINANT	OTHER BRUSH & SHRUB DOMINANT	Douglas-Fir Dominant	Hemlock-Cedar	ASPEN	RIPARIAN-DECIDUOUS	PONDEROSA PINE	MIXED CONIFER	True FIR	LODGEPOLE PINE	SUB-ALPINE Species	ALPINE MEADOW
	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F
	18 25	6 20	18 26	15 19	8 16	5 8	5 8	2 13	6 19	10 14	7 9	5 6	4 6	7 10	9 15
OLD (160 + years)						4 7	4 7	NATURAL ROTATION AGE		5 10	6 8	5 6	NATURAL ROTATION AGE	4 7	CLIMAX SUCCESSIONAL STAGES
MATURE (80 - 159 years)						2 4	2 4	1 6	1 6	3 7	4 5	4 4		3 5	
YOUNG (40 - 79 years)	CLIMAX SUCCESSIONAL STAGES					2 4	2 4	1 6	1 6	3 7	4 5	4 4	3 4	3 5	
POLE - SAPLING (11 - 39 years)						2 4	2 4	1 6	1 6	3 7	4 5	4 4	3 4	3 5	
BRUSH - SEEDLING (0 - 10 years)				9 18	8 14	3 8	3 8	2 11	3 15	8 13	5 9	5 6	4 6	4 7	
GRASS - FORB	18 24	5 19	18 25	15 18	6 15	3 7	3 7	2 12	5 18	9 13	4 8	3 5	3 5	6 9	9 14

NUMBER OF SPECIES REPRODUCING & FEEDING

NOTE: Low use of a certain successional stage of a plant community indicates low use of that stage by the life form as a whole. A particular species within the life form may be highly dependent on that one stage. For more detail see Figures 2 and 3.

The number above each ba indicates number of species using this successional stage within this plant community.

1/ FRED HALL

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Figure 2. Species Orientation to Plant Communities

Life Form 4

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Dry Meadow	Moist Meadow	Other Grass Dominant	Sage-bitterbrush dominant	Other Brush & Shrub Dom	Douglas-Fir Dom.	Hemlock-Cedar	Aspen	Riparian Deciduous	Ponderosa Pine	Mixed Conifer	TRUE Fir	Lodgepole Pine	Subalpine Species	Alpine Meadow	Number of plant Communities USED: Reproduction	Feeding
UTST	Side-blotched Lizard	XO		XO	XO	XO				XO							5	5
CAAU	Turkey Vulture	XO	O	XO	O	O	O	O	O	O	XO	O	O	O	O	O	3	15
BURE	Ferruginous Hawk	XO	O	XO	X						O						3	4
FAME	Prairie Falcon	XO	O	XO						O						O	2	5
FAPEA	AMERICAN Peregrine Falcon	O	O	O	O	O			O	O	O	XO	XO	XO	XO	XO	5	13
LALE	White-tailed Ptarmigan														O	XO	1	2
ALCH	Chukar			XO	XO	O											2	3
COLI	Rock Dove	XO	O	XO	X	O				O							3	5
CYNI	Black Swift	XO	O	XO			XO	XO	O	O	XO	XO					6	9
AESA	White-throated Swift	O	O	O	O	O			O	O	XO					XO	2	9
SASA	Say's Phoebe	XO	O	XO	XO	XO			O		XO						5	7
HIRU	Barn Swallow	XO	XO	XO					O	O							3	5
Number of species using plant community	Reproduction																	
	Feeding																	

Figure 2. Species Orientation to Plant Communities

Life Form 4

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Dry Meadow	Moist Meadow	Other Grass Dominant	Sage-bitterbrush dominant	Other Brush & Shrub Dom	Douglas-Fir Dom.	Hemlock-Cedar	Aspen	Riparian Deciduous	Ponderosa Pine	Mixed Conifer	TRUE Fir	Lodgepole Pine	Subalpine Species	Alpine Meadow	Number of plant Communities USED: Reproduction	Feeding
PEPY	Cliff Swallow	XO	XO	XO					O	O							3	5
COCOR	Common Raven	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	15	15
CAMEX	Canyon Wren	XO		XO	XO	XO					XO						5	5
SAOB	Rock Wren	XO		XO	XO	XO											4	4
LETE	Gray-crowned Rosy Finch	O	O	O											XO	XO	2	5
MYKE	KEEN'S MYOTIS						XO	XO	O	XO		XO				O	4	6
MYLE	Small-footed Myotis	XO	O	O	XO					XO							3	5
PIHE	Western Pipistrelle	XO			XO					XO							3	3
PLTO	TOWNSEND'S Big-eared Bat	XO	XO	XO	XO		O	O	O	O	XO						5	9
Number of species using plant community	Reproduction																	
	Feeding																	

Figure 2. Species Orientation to Plant Communities

Life Form 4

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Dry Meadow	Moist Meadow	Other Grass Dominant	Sage-bitterbrush dominant	Other Brush & Shrub Dom	Douglas-Fir Dom.	Hemlock-Cedar	Aspen	Riparian Deciduous	Ponderosa Pine	Mixed Conifer	True Fir	Lodgepole Pine	Subalpine Species	Alpine Meadow	Number of plant Communities USED: Reproduction	Feeding
ANPA	DESERT PALLID BAT	XO	XO	XO	XO	O					XO						5	6
TAMA	BIG FREETAIL BAT	O			O					O							0	3
OCPR	PIKA		O	O												XO	1	3
MAFL	YELLOWBELLY MARMOT	XO	O	XO	XO												3	4
MACA	HOARY MARMOT															XO	1	1
NECI	BUSHYTAIL WOODRAT	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	15	15
FECO	MOUNTAIN LION	O	O	O	O	O	XO	XO	O	O	XO	XO	XO	O	O	O	5	15
LYRU	Bobcat	O	O	O	O	XO	O	O	O	O	O	XO	XO	XO	XO	O	5	15
ORAM	Mountain Goat			O		XO									XO	XO	3	4
OVCA	BIGHORN SHEEP	O		XO	XO	O				O	O	O			XO	O	3	9
Number of species using plant community	Reproduction	18	6	18	15	8	5	5	2	6	10	7	5	4	7	9		
	Feeding	25	20	26	19	16	8	8	13	19	14	9	6	6	10	15		

Figure 3. Species Orientation to Successional Stages

Life Form 4

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Grass-Forb	Brush-Seedling (0-10 yrs.)	Pole-Sapling (11-39 yrs.)	Young (40-79 yrs.)	Mature (80-159 yrs.)	Old (160+ years)	Number of Successional Stages USED	
								Reproduction	Feeding
UTST	Side-blotched Lizard	X O	X O					2	2
CAAU	Turkey Vulture	X O	X O				X O	3	3
BURE	Ferruginous Hawk	X O						1	1
FAME	Prairie Falcon	X O					X O	1	1
FAPEA	AMERICAN Peregrine Falcon	X O	X O	X O	X O	X O		6	6
LALE	White-tailed Ptarmigan	X O						1	1
ALCH	Chukar	X O	X O					2	2
COLI	Rock Dove	X O						1	1
CYNI	Black Swift	X O	O					1	2
AESA	White-throated Swift	X O	O					1	2
SASA	Say's Phoebe	X O	X O	X O	X O	X O	X O	6	6
HIRU	Barn Swallow	X O						1	1
Number of species using successional stage	Reproduction								
	Feeding								

Figure 3. Species Orientation to Successional Stages

Life Form 4

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Grass-Forb	Brush-Seedling (0-10 yrs.)	Pole-Sapling (11-39 yrs.)	Young (40-79 yrs.)	Mature (80-159 yrs.)	Old (160+ years)	Number of Successional Stages USED	
								Reproduction	Feeding
PEPY	Cliff Swallow	X O						1	1
COCOR	Common Raven	X O	X O				X O	3	3
CAMEX	CANYON WREN	X O	X O					2	2
SAOB	Rock Wren	X O	X O					2	2
LETE	Gray-crowned Rosy Finch	X O						1	1
MYKE	KEEN'S MYOTIS	O	O				X O	1	3
MYLE	Small-footed Myotis	X O	O					1	2
PIHE	Western Pipistrelle	X O	O					1	2
PLTO	TOWNSEND'S Big-Eared Bat	X O	X O	O	O	O	O	2	6
Number of species using successional stage	Reproduction								
	Feeding								

Figure 3. Species Orientation to Successional Stages

Life Form 4

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Grass-Forb	Brush-Seedling (0-10 yrs.)	Pole-Sapling (11-39 yrs.)	Young (40-79 yrs.)	Mature (80-159 yrs.)	Old (160+ years)	Number of Successional Stages USED: Reproduction	Number of Successional Stages USED: Feeding
ANPA	DESERT PALLID BAT	X O	X O				O	2	3
TAMA	BIG FREETAIL BAT	O	O					0	2
OCPR	PIKA	X O						1	1
MAFL	YELLOWBELLY MARMOT	X O						1	1
MACA	HOARY MARMOT	X O						1	1
NECI	BUSHYTAIL WOODRAT	X O	X O	X O	X O	X O	X O	6	6
FECO	MOUNTAIN LION	O	X O	X O	X O	X O	X O	5	6
LYRU	BOBCAT		X O	X O	X O	X O	X O	5	5
ORAM	MOUNTAIN GOAT	X O	X O					2	2
OVCA	BIGHORN SHEEP	X O	O	O	O	O	O	1	6
Number of species using successional stage	Reproduction	27	14	5	5	5	8		
	Feeding	30	21	7	7	7	11		

Figure 4. Species Orientation to Unique and Special Habitat Components

Life Form 4

X = Reproduction O = Feeding

SPECIES		Rivers	Streams	Sloughs	Lakes	Reservoirs (>2 ac.)	Ponds (<2 ac.)	Intermittent Ponds, Bogs	Marshes					Cliff	Cave	Rims	Talus	SNAGS	DOWN MATERIAL	No. of unique and/or special habitat components USED	
CODE	COMMON NAME								Large	Small	Tule	Sedge	Decid-uous							Reproducing	Feeding
UTST	Side-blotched Lizard													XO		XO	XO			3	3
CAAU	Turkey Vulture													X		X	O			2	1
BURE	Ferruginous Hawk													X		X	O			2	1
FAME	Prairie Falcon													X		X	O			2	1
FAPEA	AMERICAN Peregrine Falcon													XO		O	O			1	3
LALE	White-tailed Ptarmigan																XO			1	1
ALCH	Chukar													X		X	XO			3	1
COLI	Rock Dove													X		X				2	0
CYNI	Black Swift													XO		O	O			1	3
AESA	White-throated Swift													XO		O	O			1	3
SASA	Say's Phoebe															X	X			2	0
HIRU	Barn Swallow													XO			O			1	2
No. of species using unique-special habitat components	Reproducing																				
	Feeding																				

Figure 4. Species Orientation to Unique and Special Habitat Components

Life Form 4

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Rivers	Streams	Sloughs	Lakes	Reservoirs (>2 ac.)	Ponds (<2 ac.)	Intermittent Ponds, Bogs	Marshes: Large	Marshes: Small	Marshes: Tule	Marshes: Sedge	Marshes: Deciduous	Cliff	Cave	Rims	Talus	SNAGS	DOWN MATERIAL	No. of unique and/or special habitat components USED: Reproducing	No. of unique and/or special habitat components USED: Feeding
PEPY	Cliff Swallow													XO			O			1	2
COCOR	Common Raven													X		X				2	0
CAMEX	Canyon Wren															X	XO			2	1
SAOB	Rock Wren															X	XO			2	1
LETE	Gray-crowned Rosy Finch													XO			XO			2	2
MYKE	KEEN'S MYOTIS		O		O	O								XO	X			X		3	4
MYLE	Small-footed Myotis													XO	X	O	O			2	3
PIHE	Western Pipistrelle	O		O		O	O							XO	X	XO				3	6
PLTO	TOWNSEND'S Big-eared Bat													XO	X	O	O			2	3
No. of species using unique-special habitat components	Reproducing																				
	Feeding																				

Figure 4. Species Orientation to Unique and Special Habitat Components

Life Form 4

X = Reproduction O = Feeding

SPECIES		Rivers	Streams	Sloughs	Lakes	Reservoirs (>2 ac.)	Ponds (<2 ac.)	INTERMITTENT PONDS AND BOGS	Marshes					Cliff	Cave	Rims	Talus	SNAGS	DOWN MATERIAL	No. of unique and/or special habitat components USED	
CODE	COMMON NAME								Large	Small	Tule	Sedge	Decid-uous							Reproducing	Feeding
ANPA	DESERT PALLID BAT													XO	X	XO				3	2
TAMA	BIG FREETAIL BAT													X	X					2	0
OCPR	PIKA																XO			1	1
MAFL	YELLOWBELLY MARMOT															XO	XO			2	2
MACA	HOARY MARMOT																XO			1	1
NECI	BUSHYTAIL WOODRAT													XO		XO	XO		XO	4	4
FECO	MOUNTAIN LION														X	XO				2	1
LYRU	BOBCAT													O	X	XO	O		O	2	4
ORAM	MOUNTAIN GOAT													XO		XO	XO			3	3
OVCA	BIGHORN SHEEP													XO		XO	XO			3	3
No. of species using unique-special habitat components	Reproducing	0	0	0	0	0	0							22	8	18	13	1	1		
	Feeding	1	1	1	1	2	1							16	0	14	23	0	2		

FIGURE 5. Vulnerability Ratings of Species

Life Form 4. (Reproduces on or in cliffs, caves, rim and talus slopes, feeds on the ground or in the air.)

Note: Life forms 2, 3, 4 and 16 also depend on Unique Habitat components which are reflected below.

Letter Code	Species	Reproductive Orientation 1/			Feeding Orientation					Vulnerability Score 2/	Vulnerability Rating 3/		
		No. of Successional Stages Used (1)	No. of Plant Communities Used (2)	Columns 1+2 / 2 (3)	No. of Successional Stages Used (4)	No. of Plant Communities Used (5)	Columns 4 + 5 (6)	Columns 3 + 6 (7)	No. of Unique Components Subtracted from 13 (8) 4/	Columns 7-8 (9)	High -12 to +3	Med. +3 to +18	Low +18 t +33
	Herps												
UTST	Side-blotched Lizard	2	5	3.5	2	5	7	10.5	(3) 10	+0.5			
	Birds												
CAAU	Turkey Vulture	3	3	3.0	3	15	18	21.0	(1) 12	+9.0			
BURE	Ferruginous Hawk	1	3	2.0	1	4	5	7.0	(1) 12	-5.0			
FAME	Prairie Falcon	1	2	1.5	1	5	6	7.5	(1) 12	-4.5			
FAPEA	AMERICAN Peregrine Falcon	6	5	5.5	6	13	19	24.5	(3) 10	+14.5			
LALE	White-tailed Ptarmigan	1	1	1.0	1	2	3	4.0	(1) 12	-8.0			
ALCH	Chukar	2	2	2.0	2	3	5	7.0	(1) 12	-5.0			
COLI	Rock Dove	1	3	2.0	1	5	6	8.0	(0) 13	-5.0			
CYNI	Black Swift	1	6	3.5	2	9	11	14.5	(3) 10	+4.5			
AESA	White-throated Swift	1	2	1.5	2	9	11	12.5	(3) 10	+2.5			
SASA	Say's Phoebe	6	5	5.5	6	7	13	18.5	(0) 13	+5.5			

1/ Reproductive orientation is weighed doubly to the feeding orientation; this is done by dividing the sum of columns 1 and 2 by 2. The results are shown in column 3.

2/ Vulnerabillty score is derived by subtracting column 8 from column 7.

3/ Species of special interest shown (rated) in Appendix 2.

4/ This gives the inverted value of each number in range from one to twelve. (Twelve is the highest number of unique or special habitat components used by any single species.) Number in parenthesis is number of unique components used for feeding.

FIGURE 5. Vulnerability Ratings of Species

Life Form 4.

Note: Life forms 2, 3, 4 and 16 also depend on Unique Habitat components which are reflected below.

Letter Code	Species	Reproductive Orientation 1/			Feeding Orientation					Vulnerability Score 2/	Vulnerability Rating 3/		
		No. of Successional Stages Used (1)	No. of Plant Communities Used (2)	Columns 1+2 / 2 (3)	No. of Successional Stages Used (4)	No. of Plant Communities Used (5)	Columns 4 + 5 (6)	Columns 3 + 6 (7)	No. of Unique Components Subtracted from 13 (8) 4/	Columns 7-8 (9)	High -12 to +3	Med. +3 to +18	Low +18 t +33
HIRU	Barn Swallow	1	3	2.0	1	5	6	8.0	11 (2)	-3.0			
PEPY	Cliff Swallow	1	3	2.0	1	5	6	8.0	11 (2)	-3.0			
COCOR	Common Raven	3	15	9.0	3	15	18	27.0	13 (0)	+14.0			
CAMEX	Canyon Wren	2	5	3.5	2	5	7	10.5	12 (1)	-1.5			
SAOB	Rock Wren	2	4	3.0	2	4	9	12.0	12 (1)	0.0			
LETE	Gray-Crowned Rosy Finch	1	2	1.5	1	5	6	7.5	11 (2)	-3.5			
MYKE	KEEN'S MYOTIS	1	4	2.5	3	6	9	11.5	9 (4)	2.5			
MYLE	Small-footed Myotis	1	3	2.0	2	5	7	9.0	10 (3)	-1.0			
PIHE	Western Pipistrelle	1	3	2.0	2	3	5	7.0	7 (6)	0.0			
PLTO	TOWNSEND'S Big-Eared BAT	2	5	3.5	6	9	15	18.5	10 (3)	8.5			

1/ Reproductive orientation is weighed doubly to the feeding orientation; this is done by dividing the sum of columns 1 and 2 by 2. The results are shown in column 3.

2/ Vulnerabillty score is derived by subtracting column 8 from column 7.

3/ Species of special interest shown (rated) in Appendix 2.

4/ This gives the inverted value of each number in range from one to twelve. (Twelve is the highest number of unique or special habitat components used by any single species.) Number in parenthesis is number of unique components used for feeding.

FIGURE 5. Vulnerability Ratings of Species

Life Form 4.

Note: Life forms 2, 3, 4 and 16 also depend on Unique Habitat components which are reflected below.

Letter Code	Species	Reproductive Orientation 1/ No. of Successional Stages Used (1)	Reproductive Orientation No. of Plant Communities Used (2)	Reproductive Orientation Columns 1+2 / 2 (3)	Feeding Orientation No. of Successional Stages Used (4)	Feeding Orientation No. of Plant Communities Used (5)	Feeding Orientation Columns 4 + 5 (6)	Feeding Orientation Columns 3 + 6 (7)	No. of Unique Components Subtracted from 13 (8) 4/	Vulnerability Score 2/ Columns 7-8 (9)	Vulnerability Rating 3/ High -12 to +3	Med. +3 to +18	Low +18 t +33
ANPA	DESERT Pallid Bat	2	5	3.5	3	6	9	12.5	11 (2)	+1.5			
TAMA	BIG FREETAIL BAT	0	0	0.0	2	3	5	5.0	13 (0)	-8.0			
OCPR	Pika	1	1	1.0	1	3	4	5.0	12 (1)	-7.0			
MAFL	Yellow-belly Marmot	1	3	2.0	1	4	5	7.0	11 (2)	-4.0			
MACA	HOARY MARMOT	1	1	1.0	1	1	2	3.0	12 (1)	-9.0			
MECI	Bushy-tail Woodrat	6	15	10.5	6	15	21	31.5	9 (4)	+22.5			
FECO	MOUNTAIN LION	5	5	5.0	6	15	21	26.0	12 (1)	+14.0			
LYRU	Bobcat	5	5	5.0	5	15	20	25.0	9 (4)	+16.0			
ORAM	Mountain Goat	2	3	2.5	2	4	6	8.5	10 (3)	-1.5			
OVCA	Big-horn Sheep	1	3	2.0	6	9	15	17.0	10 (3)	+7.0			

1/ Reproductive orientation is weighed doubly to the feeding orientation; this is done by dividing the sum of columns 1 and 2 by 2. The results are shown in column 3.

2/ Vulnerabillty score is derived by subtracting column 8 from column 7.

3/ Species of special interest shown (rated) in Appendix 2.

4/ This gives the inverted value of each number in range from one to twelve. (Twelve is the highest number of unique or special habitat components used by any single species.) Numbers in parenthesis is number of unique components used for feeding.

Figure 1 Relative Degree of Use by the Life Form to Indicated Plant Communities and Successional Stages

Life Form No. 5

NOTE: Only those species known to reproduce in Area 2 are shown on the various life form tables.

Total number in life form equals 50 species.

Reproduction Orientation [redacted]

Feeding Orientation XXXXX

PLANT COMMUNITY	DRY MEADOW	MOIST MEADOW	OTHER GRASS DOMINANT	SAGE-BITTER-BRUSH DOMINANT	OTHER BRUSH & SHRUB DOMINANT	Douglas-Fir Dominant	Hemlock-Cedar	ASPEN	RIPARIAN-DECIDUOUS	PONDEROSA P[redacted]	MI[redacted] CO[redacted]	True FIR	LODGEPOLE PINE	SUB-ALPINE Species	ALPINE MEADOW
SUCCESSIONAL STAGES 1/	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F
	14 26	10 24	23 34	16 21	33 39	5 13	4 12	9 14	15 22	13 19	15 18	6 13	5 12	7 12	2 7
OLD (160 + years)						4 12	3 10	NATURAL ROTATION AGE		5 15	7 15	4 10	NATURAL ROTATION AGE	4 9	CLIMAX SUCCESSIONAL STAGES
MATURE (80 - 159 years)						4 13	3 12	2 13	7 14	7 17	8 17	6 12		6 10	
YOUNG (40 - 79 years)	CLIMAX SUCCESSIONAL STAGES					3 13	2 12	2 11	10 17	7 17	7 17	5 13	4 12	5 12	
POLE - SAPLING (11 - 39 years)						4 13	3 12	9 13	12 17	13 16	14 16	5 12	4 12	5 12	
BRUSH - SEEDLING (0 - 10 years)				14 20	30 36	4 12	3 11	9 14	13 22	13 18	14 17	4 12	3 11	5 11	
GRASS - FORB	14 26	9 24	20 33	14 21	19 36	2 12	1 10	1 12	8 20	4 17	4 16	1 10	1 10	2 10	2 7

NOTE: Low use of a certain successional stage of a plant community indicates low use of that stage by the life form as a whole. A particular species within the life form may be highly dependent on that one stage. For more detail see Figures 2 and 3.

The number above each ba[r] indicates number of species using this successional stage within this plant community.

NUMBER OF SPECIES REPRODUCING & FEEDING

1/ FRED HALL

Figure 2. Species Orientation to Plant Communities

Life Form 5

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Dry Meadow	Moist Meadow	Other Grass Dominant	Sage-bitterbrush dominant	Other Brush & Shrub Dom	Douglas-fir Dom.	Hemlock-Cedar	Aspen	Riparian Deciduous	Ponderosa Pine	Mixed Conifer	True Fir	Lodgepole Pine	Subalpine Species	Alpine Meadow	Number of plant Communities USED: Reproduction	Feeding
SCOC	Western Fence Lizard	XO		XO	XO												3	3
SCGR	Sagebrush Lizard				XO	XO					XO	XO					4	4
PHDO	Short-horned Lizard	XO		XO	XO	XO											4	4
GEMU	FOOTHILL ALLIGATOR LIZARD			XO	XO	XO					XO	XO					5	5
GECO	NORTHERN ALLIGATOR LIZARD			XO	XO	XO	XO				XO	XO					6	6
COCO	RACER	XO		XO	XO	XO					O	O					4	6
MATA	DESERT Striped Whipsnake	XO		XO	XO	XO											4	4
PIME	Gopher Snake	XO	XO	XO	XO	XO											5	5
THEL	Western Garter Snake		XO	XO		XO	O		O	XO							4	6
THOR	NORTHWESTERN GARTER SNAKE		XO	XO		XO	O		O	XO							4	6
HYTO	SPOTTED Night Snake	O	O	XO	XO	O											2	5
CRVI	Western Rattlesnake	O	O	O	XO	XO			O	XO	O	O					3	9
Number of species using plant community	Reproduction																	
	Feeding																	

Figure 2. Species Orientation to Plant Communities

Life Form 5

X = Reproduction 0 = Feeding

SPECIES CODE	COMMON NAME	Dry Meadow	Moist Meadow	Other Grass Dominant	Sage-bitterbrush dominant	Other Brush & Shrub Dom.	Douglas-Fir Dom.	Hemlock-Cedar	Aspen	Riparian Deciduous	Ponderosa Pine	Mixed Conifer	True Fir	Lodgepole Pine	Subalpine Species	Alpine Meadow	Number of plant Communities USED: Reproduction	Feeding
CICY	Marsh Hawk	0	XO	XO		XO				0							3	5
DEOB	Blue Grouse	0	0	0		XO	XO	0	XO		XO	XO	0	0	0	0	5	13
CACAN	SPRUCE Grouse					0		0					XO	XO	XO		3	5
BOUM	Ruffed Grouse			0		XO			XO	XO	XO	XO	0				5	7
PEPH	Sharp-tailed Grouse	XO	0	XO		XO											3	4
CEUR	Sage grouse			0	XO	0											1	3
COVI	Bobwhite					XO				XO							2	2
LOCA	California Quail				XO	XO				XO	0						3	4
ORPI	Mountain Quail					XO	0			XO	XO						3	4
PHCO	Ring-necked Pheasant	0		XO		XO											2	3
PEPE	Gray Partridge	XO	XO	XO		XO											4	4
MEGA	Turkey	0	0	0		XO			XO	0	XO	XO					4	8
BAAM	Upland SANDPIPER	XO		XO													2	2
ASFL	Short-eared Owl	XO	XO	0	0	0				XO							3	6
Number of species using plant community	Reproduction																	
	Feeding																	

Figure 2. Species Orientation to Plant Communities

Life Form 5

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Dry Meadow	Moist Meadow	Other Grass Dominant	Sage-bitterbrush dominant	Other Brush & Shrub Dom	Douglas-fir Dom.	Hemlock-Cedar	Aspen	Riparian Deciduous	Ponderosa Pine	Mixed Conifer	True Fir	Lodgepole Pine	Subalpine Species	Alpine Meadow	Number of plant Communities USED: Reproduction	Feeding
ERAL	Horned Lark	X O	O	X O													2	3
CAGU	Hermit Thrush						X O	X O			O	X O	X O	X O	X O		6	7
HYFU	Veery					X O				X O							2	2
ANSP	Water Pipit		O	O												X O	1	3
DOOR	Bobolink		X O							X O							2	2
STNEG	Western Meadowlark	X O		X O	X O	X O											4	4
PASA	Savannah Sparrow	X O	X O	X O													3	3
AMSA	Grasshopper Sparrow	X O		O		X O											2	3
POGRA	Vesper Sparrow	X O	X O	X O	X O	O											4	5
CHGR	Lark Sparrow	O	O	X O	O	O			O								1	6
JUHY	Dark-eyed Junco					X O	X O	X O	X O	X O	X O	X O	X O	X O	X O		10	10
DIVI	Opossum									X O							1	1
Number of species using plant community	Reproduction																	
	Feeding																	

Figure 2. Species Orientation to Plant Communities

Life Form 5

X = Reproduction 0 = Feeding

SPECIES CODE	COMMON NAME	Dry Meadow	Moist Meadow	Other Grass Dominant	Sage-bitterbrush dominant	Other Brush & Shrub Dom	Douglas-Fir Dom.	Hemlock-Cedar	Aspen	Riparian Deciduous	Ponderosa Pine	Mixed Conifer	True Fir	Lodgepole Pine	Subalpine Species	Alpine Meadow	Number of plant Communities USED: Reproduction	Feeding
LETO	Whitetail Jackrabbit			XO	XO	XO											3	3
LEAM	Snowshoe Hare									XO		XO	XO	XO	XO		5	5
LECA	Blacktail Jackrabbit	O	O	XO	XO	XO											3	5
GUGU	Wolverine						O	O	O	O	O	O	XO	O	XO	O	2	10
FECA	Feral Housecat		XO	XO		XO				XO	XO						5	5
LYLY	Lynx					XO	XO	XO				XO	XO	XO	XO		7	7
CECA	ELK	O	O	O	O	XO	O	O	XO	O	XO	XO	O	O	O	O	4	15
ODHEH	Mule Deer	O	O	O	O	XO	O	O	XO	O	XO	XO	O	O	O	O	4	15
ODHEC	COLUMBIA BLACKTAIL DEER	O	O	O	O	XO	O	O	XO	O	XO	XO	O	O	O	O	4	15
ODVI	NORTHWESTERN WHITETAIL DEER	O	O			XO		XO	XO	XO	O	XO	O	O			5	10
ALAL	AMERICAN MOOSE		O			XO	O	O	XO	O	XO	XO	O	O	O		4	11
RATA	MOUNTAIN CARIBOU							O							XO	XO	2	3
Number of species using plant community	Reproduction	14	10	23	16	33	5	4	9	15	13	15	6	5	7	2		
	Feeding	26	24	34	21	39	13	12	14	22	19	18	13	12	12	7		

Figure 3. Species Orientation to Successional Stages

Life Form 5

X = Reproduction O = Feeding

SPECIES CODE	SPECIES COMMON NAME	Grass-Forb	Brush-Seedling (0-10 yrs.)	Pole-Sapling (11-39 yrs.)	Young (40-79 yrs.)	Mature (80-159 yrs.)	Old (160+ years)	Number of Successional Stages USED: Reproduction	Number of Successional Stages USED: Feeding
SCOC	Western Fence Lizard	X O	X O	X O	X O	X O	X O	6	6
SCGR	Sagebrush Lizard	X O	X O	X O	X O	X O	X O	6	6
PHDO	Short-horned Lizard	X O	X O	X O	X O	X O	X O	6	6
GEMU	FOOTHILL ALLIGATOR LIZARD	X O	X O	X O	X O	X O	X O	6	6
GECO	NORTHERN ALLIGATOR LIZARD	X O	X O	X O	X O	X O	X O	6	6
COCO	RACER	X O	X O	X O	X O	X O	X O	6	6
MATA	DESERT Striped Whipsnake	X O	X O	X O	X O	X O	X O	6	6
PIME	Gopher Snake	X O	X O	X O	X O	X O	X O	6	6
THEL	Western Garter Snake	X O	X O	X O	X O	X O	X O	6	6
THOR	NORTHWESTERN GARTER SNAKE	X O	X O	X O	X O	X O	X O	6	6
HYTO	SPOTTED Night Snake	X O	X O	X O	X O	X O	X O	6	6
CRVI	Western Rattlesnake	X O	X O	X O	X O	X O	X O	6	6
Number of species using successional stage	Reproduction								
	Feeding								

Figure 3. Species Orientation to Successional Stages

Life Form 5

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Grass-Forb	Brush-Seedling (0-10 yrs.)	Pole-Sapling (11-39 yrs.)	Young (40-79 yrs.)	Mature (80-159 yrs.)	Old (160+ years)	Number of Successional Stages USED	
								Reproduction	Feeding
CICY	Marsh Hawk	X O	X O					2	2
DEOB	Blue Grouse	O	X O	X O	O	O	O	2	6
CACAN	SPRUCE Grouse		O	X O	X O	X O	O	3	5
BOUM	Ruffed Grouse		X O	X	O	X O	X O	4	4
PEPH	Sharp-tailed Grouse	X O	X O					2	2
CEUR	Sage Grouse	O	X O					1	2
COVI	Bobwhite	O	X O	X O	X O			3	4
LOCA	California Quail	O	X O	X O	X O			3	4
ORPI	Mountain Quail	O	X O	X O	X O	O	O	3	6
PHCO	Ring-necked Pheasant	X O	X O	O	O	O		2	5
PEPE	Gray Partridge	X O						1	1
MEGA	Turkey	O	X O	X	X	O	O	3	4
BAAM	Upland SANDPIPER	X O						1	1
Number of species using successional stage	Reproduction								
	Feeding								

Figure 3. Species Orientation to Successional Stages

Life Form 5

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Grass-Forb	Brush-Seedling (0-10 yrs.)	Pole-Sapling (11-39 yrs.)	Young (40-79 yrs.)	Mature (80-159 yrs.)	Old (160+ years)	Number of Successional Stages USED	
								Reproduction	Feeding
ASFL	Short-eared Owl	XO	O					1	2
ERAL	Horned Lark	XO						1	1
CAGU	Hermit Thrush			O	O	X O	X O	2	4
HYFU	Veery		X O	X O	X O			3	3
ANSP	Water Pipit	X O						1	1
DOOR	Bobolink	X O	O					1	2
STNEG	Western Meadowlark	X O	O					1	2
PASA	Savannah Sparrow	X O	O					1	2
AMSA	Grasshopper Sparrow	X O						1	1
POGRA	Vesper Sparrow	X O						1	1
CHGR	Lark Sparrow	X O	O					1	2
JUHY	Dark-eyed Junco	X O	X O	X O	X O	X O	X O	6	6
DIVI	Opossum	X O	X O	X O	X O	X O		5	5
Number of species using successional stage	Reproduction								
	Feeding								

Figure 3. Species Orientation to Successional Stages

Life Form 5

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Grass-Forb	Brush-Seedling (0-10 yrs.)	Pole-Sapling (11-39 yrs.)	Young (40-79 yrs.)	Mature (80-159 yrs.)	Old (160+ years)	Number of Successional Stages USED: Reproduction	Number of Successional Stages USED: Feeding
LETO	Whitetail Jackrabbit	X O	X O					2	2
LEAM	Snowshoe Hare	O	X O	X O	X O	X		4	4
LECA	Blacktail Jackrabbit	X O	X O					2	2
GUGU	Wolverine	O	X O	X O	X O	X O	X O	5	6
FECA	Feral Housecat	O	X O	X O	X O	X O		4	5
LYLY	Lynx	O	X O	X O	X O	X O	X O	5	6
CECA	ELK	O	X O	X O	O	O	O	2	6
ODHEH	MULE DEER	O	X O	X O	O	O	O	2	6
ODHEC	COLUMBIA BLACKTAIL DEER	O	X O	X O	O	O	O	2	6
ODVI	NORTHWESTERN WHITETAIL DEER	O	X O	X O	O	O		2	5
ALAL	AMERICAN MOOSE	O	X O	X O	X O	O		3	5
RATA	MOUNTAIN CARIBOU	O	O		O	X O	X O	2	5
Number of species using successional stage	Reproduction	31	37	31	25	21	18		
	Feeding	46	43	32	33	30	25		

Figure 4. Species Orientation to Unique and Special Habitat Components

Life Form 5

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Rivers	Streams	Sloughs	Lakes	Reservoirs (>2 ac.)	Ponds (<2 ac.)	Intermittent Ponds, Bogs	Marshes: Large	Marshes: Small	Marshes: Tule	Marshes: Sedge	Marshes: Deciduous	Cliff	Cave	Rims	Talus	SNAGS	DOWN MATERIAL	No. of unique and/or special habitat components USED: Reproducing	No. of unique and/or special habitat components USED: Feeding
SCOC	WESTERN FENCE LIZARD													XO			XO			2	2
PIME	GOPHER SNAKE																		O	O	1
THEL	WESTERN GARTER SNAKE	O	O	O	O	O	O	O	O	O	O	O	O						O	O	13
THOR	NORTHWESTERN GARTER SNAKE	O	O	O	O	O	O	O	O	O	O	O	O						XO	1	13
HYTO	SPOTTED NIGHT SNAKE																X			1	0
CRVI	WESTERN RATTLESNAKE													XO		XO	XO			3	3
CICY	MARSH HAWK							O	O	O	O	O	O							0	6
CACAN	SPRUCE GROUSE																		XO	1	1
BOUM	RUFFED GROUSE																		XO	1	1
COVI	BOBWHITE																		X	1	0
HYFU	VEERY																		XO	1	1
ANSP	WATER PIPIT		O				O			O										0	3
DOOR	BOBOLINK			O				O	O	O	O	O	O							0	7
JUHY	DARK-EYED JUNCO																		XO	1	1
LEAM	SNOWSHOE HARE																		XO	1	1
GUGU	WOLVERINE																		X	1	0
No. of species using unique-special habitat components	Reproducing																				
	Feeding																				

Figure 4. Species Orientation to Unique and Special Habitat Components

Life Form 5

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Rivers	Streams	Sloughs	Lakes	Reservoirs (>2 ac.)	Ponds (<2 ac.)	INTERMITTENT POOLS AND BOGS	Marshes: Large	Marshes: Small	Marshes: Tule	Marshes: Sedge	Marshes: Deciduous	Cliff	Cave	Rims	Talus	SNAGS	DOWN MATERIAL	No. of unique and/or special habitat components USED: Reproducing	No. of unique and/or special habitat components USED: Feeding
FECA	FERAL HOUSECAT														X				XO	2	1
LYLY	LYNX													XO	XO	XO	O		XO	4	5
ALAL	AMERICAN MOOSE				O		O	O	O	O		O	O							O	7
No. of species Using unique-Special habitat components	Reproducing	0	0	0	0	0	0	0	0	0	0	0	0	3	2	2	3	0	10		
	Feeding	2	3	3	3	2	4	5	5	6	4	5	5	3	1	2	3	0	10		

FIGURE 5. Vulnerability Ratings of Species

Life Form: 5 (Reproduces on the ground, without specific water, cliff, rim or talus association, and feeds on the ground.)

Letter Code	Species	Reproductive Orientation 1/ No. of Successional Stages Used (1)	Reproductive Orientation 1/ No. of Plant Communities Used (2)	Reproductive Orientation 1/ 1 + 2 (3)	Reproductive Orientation 1/ 3/2 (4)	Feeding Orientation No. of Successional Stages Used (5)	Feeding Orientation No. of Plant Communities Used (6)	Feeding Orientation 5 + 6 (7)	Vulnerability Score 2/ 4 + 7 (8)
	Herps								
SCOC	Western Fence Lizard	6	3	9	4.5	6	3	9	13.5
SCGR	Sagebrush Lizard	6	4	10	5.0	6	4	10	15.0
PHDO	Short-horned Lizard	6	4	10	5.0	6	4	10	15.0
GEMU	FOOTHILL ALLIGATOR LIZARD	6	5	11	5.5	6	5	11	16.5
GECO	NORTHERN ALLIGATOR LIZARD	6	6	12	6.0	6	6	12	18.0
COCO	RACER	6	4	10	5.0	6	6	12	17.0
MATA	DESERT Striped Whipsnake	6	4	10	5.0	6	4	10	15.0
PIME	Gopher Snake	6	5	11	5.5	6	5	11	16.5
THEL	Western Garter Snake	6	4	10	5.0	6	6	12	17.0
THOR	NORTHWESTERN GARTER SNAKE	6	4	10	5.0	6	6	12	17.0
HYTO	SPOTTED NIGHT SNAKE	6	2	8	4.0	6	5	11	15.0
CRVI	Western Rattlesnake	6	3	9	4.5	6	9	15	19.5
	Birds								
CICY	Marsh Hawk	2	3	5	2.5	2	5	7	9.5
DEOB	Blue Grouse	2	5	7	3.5	6	13	19	22.5
CACAN	SPRUCE Grouse	3	3	6	3.0	5	5	10	13.0

Vulnerability Rating 3/

High	Medium	Low
-12 to +3	+3 to +18	+18 to +33

1/ Reproductive orientation is weighted doubly to the feeding orientation; this is done by dividing the sum of columns 1 and 2 (= column 3) by 2. The results are shown in column 4.

2/ Vulnerability score is derived by adding columns 4 and 7.

3/ Species of special interest listed (rated) in Appendix 2.

FIGURE 5. Vulnerability Ratings of Species

Life Form 5

Page 2 of 4

Letter Code	Species	Reproductive Orientation 1/ No. of Successional Stages Used (1)	No. of Plant Communities Used (2)	1 + 2 (3)	3/2 (4)	Feeding Orientation No. of Successional Stages Used (5)	No. of Plant Communities Used (6)	5 + 6 (7)	Vulnerability Score 2/ 4 + 7 (8)	Vulnerability Rating 3/ High -12 to +3	Medium +3 to +18	Low +18 to+3
BOUM	Ruffed Grouse	4	5	9	4.5	4	7	11	15.5			
PEPH	Sharp-tailed Grouse	2	3	5	2.5	2	4	6	8.5			
CEUR	Sage Grouse	1	1	2	1.0	2	3	5	6.0			
COVI	Bobwhite	3	2	5	2.5	4	2	6	8.5			
LOCA	California Quail	3	3	6	3.0	4	4	8	11.0			
ORPI	Mountain Quail	3	3	6	3.0	6	4	10	13.0			
PEPE	Gray Partridge	1	4	5	2.5	1	4	5	7.5			
PHCO	Ring-necked Pheasant	2	2	4	2.0	5	3	8	10.0			
MEGA	Turkey	3	4	7	3.5	4	8	12	15.5			
BAAM	Upland SANDPIPER	1	2	3	1.5	1	2	3	4.5			
ASFL	Short-eared Owl	1	3	4	2.0	2	6	8	10.0			
ERAL	Horned Lark	1	2	3	1.5	1	3	4	5.5			
CAGA	Hermit Thrush	2	6	8	4.0	4	7	11	15.0			

1/ Reproductive orientation is weighted doubly to the feeding orientation; this is done by dividing the sum of columns 1 and 2 (= column 3) by 2. The results are shown in column 4.

2/ Vulnerability score is derived by adding columns 4 and 7.

3/ Species of special interest listed (rated) in Appendix 2.

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FIGURE 5. Vulnerability Ratings of Species

Life Form 5

Page 3 of 4

Letter Code	Species	Reproductive Orientation 1/ No. of Successional Stages Used (1)	Reproductive Orientation 1/ No. of Plant Communities Used (2)	Reproductive Orientation 1/ 1 + 2 (3)	Reproductive Orientation 1/ 3/2 (4)	Feeding Orientation No. of Successional Stages Used (5)	Feeding Orientation No. of Plant Communities Used (6)	Feeding Orientation 5 + 6 (7)	Vulnerability Score 2/ 4 + 7 (8)	Vulnerability Rating 3/ High -12 to +3 / Medium (2) +3 to +18 / Low +18 to +33
HYFU	Veery	3	2	5	2.5	3	2	5	7.5	
ANSP	Water Pipit	1	1	2	1.0	1	3	4	5.0	
DOOR	Bobolink	1	2	3	1.5	2	2	4	5.5	
STNEG	Western Meadowlark	1	4	5	2.5	2	4	6	8.5	
PASA	Savannah Sparrow	1	3	4	2.0	2	3	5	7.0	
AMSA	Grasshopper Sparrow	1	2	3	1.5	1	3	4	5.5	
POGRA	Vesper Sparrow	1	4	5	2.5	1	5	6	8.5	
CHGR	Lark Sparrow	1	1	2	1.0	2	6	8	9.0	
JUHY	Dark--eyed Junco	6	10	16	8.0	6	10	16	24.0	
DIVI	Opossum	5	1	6	3.0	5	1	6	9.0	
LETO	WHITETAIL JACKRABBIT	2	3	5	2.5	2	3	5	7.5	
LEAM	Snowshoe Hare	4	5	9	4.5	4	5	9	13.5	
LECA	BLACKTAIL Jackrabbit	2	3	5	2.5	2	5	7	9.5	

1/ Reproductive orientation is weighted doubly to the feeding orientation; this is done by dividing the sum of columns 1 and 2 (= column 3) by 2. The results are shown in column 4.

2/ Vulnerabilityscore is derived by adding columns 4 and 7.

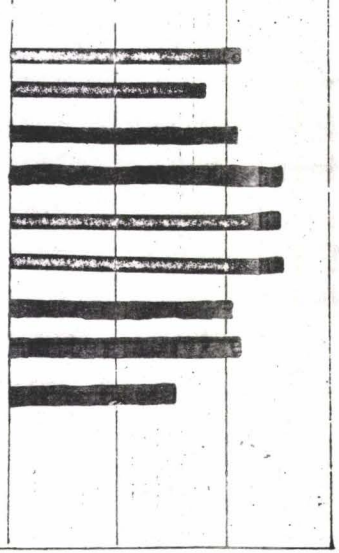
3/ Species of special interest listed (rated) in Appendix 2.

FIGURE 5. Vulnerability Ratings of Species

Life Form 5

Letter Code	Species	Reproductive Orientation 1/ No. of Successional Stages Used (1)	No. of Plant Communities Used (2)	1 + 2 (3)	3/2 (4)	Feeding Orientation No. of Successional Stages Used (5)	No. of Plant Communities Used (6)	5 + 6 (7)	Vulnerability Score 2/ 4 + 7 (8)
GUGU	Wolverine	5	2	7	3.5	6	10	16	19.5
FECA	Feral Housecat	4	5	9	4.5	5	5	10	14.5
LYCA	Lynx	5	7	12	6.0	6	7	13	19.0
CECA	ELK	2	4	6	3.0	6	15	21	24.0
ODHEH	MULE DEER	2	4	6	3.0	6	15	21	24.0
ODHEC	COLUMBIA BLACKTAIL DEER	2	4	6	3.0	6	15	21	24.0
ODVI	NORTHWESTERN WhiteTAIL Deer	2	5	7	3.5	5	10	15	18.5
ALAL	AMERICAN MOOSE	3	4	7	3.5	5	11	16	19.5
RATA	MOUNTAIN CARIBOU	2	2	4	2.0	5	3	8	10.0

Vulnerability Rating 3/ — High -12 to +3 | Medium (2) +3 to +18 | Low +18 to +33



1/ Reproductive orientation is weighted doubly to the feeding orientation; this is done by dividing the sum of columns 1 and 2 (= column 3) by 2. The results are shown in column 4.

2/ Vulnerability score is derived by adding columns 4 and 7.

3/ Species of special interest listed (rated) in Appendix 2.

Figure 1 Relative Degree of Use by the Life Form to Indicated Plant Communities and Successional Stages

Life Form No. 6

NOTE: Only those species known to reproduce in Area 2 are shown on the various life form tables.

Total number in life form equals 7 species.

Reproduction Orientation

Feeding Orientation XXXXXX

PLANT COMMUNITY	DRY MEADOW		MOIST MEADOW		OTHER GRASS DOMINANT		SAGE-BITTER BRUSH DOMINANT		OTHER BRUSH & SHRUB DOMINANT		Douglas-Fir Dominant		Hemlock-Cedar		ASPEN		RIPARIAN-DECIDUOUS		PONDEROSA PINE		MIXED CONIFER		True FIR		LODGEPOLE PINE		SUB-ALPINE Species		ALPINE MEADOW		
SUCCESSIONAL STAGES 1/	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	NUMBER OF SPECIES REPRODUCING & FEEDING
	2	4	0	3	1	3	3	3	3	4	1	2	0	0	1	3	3	3	2	3	2	2	0	1	0	0	1	1	1	2	
OLD (160 + years)											1	1	0	0	NATURAL ROTATION AGE				1	2	0	0	0	0			0	0			
MATURE (80 - 159 years)											1	1	0	0	0	1	0	1	2	2	1	0	0	0	NATURAL ROTATION AGE		0	1			
YOUNG (40 - 79 years)											1	2	0	0	0	3	0	3	0	3	0	2	0	1	0	0	0	1			
POLE - SAPLING (11 - 39 years)											1	2	0	0	0	3	0	3	0	3	0	2	0	1	0	0	0	1			
BRUSH - SEEDLING (0 - 10 years)							3	3	3	4	1	2	0	0	1	3	3	3	2	3	2	2	0	1	0	0	1	1			
GRASS - FORB	2	4	0	3	1	3	2	3	1	2	1	2	0	0	0	2	1	1	1	3	0	1	0	1	0	0	1	1	1	2	

CLIMAX SUCCESSIONAL STAGES

NOTE: Low use of a certain successional stage of a plant community indicates low use of that stage by the life form as a whole. A particular species within the life form may be highly dependent on that one stage. For more detail see Figures 2 and 3.

The number above each ba indicates number of species using this successional stage within this plant community.

1/ FRED HALL

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Figure 2. Species Orientation to Plant Communities

Life Form 6

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Dry Meadow	Moist Meadow	Other Grass Dominant	Sage-bitterbrush dominant	Other Brush & Shrub Dom	Douglas-Fir Dom.	Hemlock-Cedar	Aspen	Riparian Deciduous	Ponderosa Pine	Mixed Conifer	TRUE Fir	Lodgepole Pine	Subalpine Species	Alpine Meadow	Number of plant Communities USED: Reproduction	Feeding
PHNU	Poor-will	O	O	O	XO	O											1	5
CHMI	Common Night Hawk	XO	O	O	XO	XO			O		XO					O	4	8
MYTO	Townsend's Solitaire	XO		XO			XO				O						3	4
VECE	Orange-crowned Warbler					XO				XO							2	2
VERU	Nashville Warbler					XO			XO	XO		XO					4	4
MELI	Lincoln's Sparrow									XO					XO	XO	3	3
ERDO	Porcupine	O	O		XO		O		O		XO	XO	O				3	8
Number of species using plant community	Reproduction	2	0	1	3	3	1	0	1	3	2	2	0	0	1	1		
	Feeding	4	3	3	3	4	2	0	3	3	3	2	1	0	1	2		

Figure 3. Species Orientation to Successional Stages

Life Form 6

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Grass-Forb	Brush-Seedling (0-10 yrs.)	Pole-Sapling (11-39 yrs.)	Young (40-79 yrs.)	Mature (80-159 yrs.)	Old (160+ years)	Number of Successional Stages USED: Reproduction	Feeding
PHNU	Poor-Will	X O	X O	O	O	O	O	2	6
CHMI	Common Night Hawk	X O	X O	O	O	X O	X O	4	6
MYTO	Townsend's Solitaire	X O	X O	X O	X O	X O	X O	6	6
VECE	Orange-crowned Warbler		X O	O	O			1	3
VERU	Nashville Warbler		X O	O	O			1	3
MELI	Lincoln's Sparrow	X O	X O	O	O	O		2	5
ERDO	Porcupine	O	X O	O	O	X		2	4
Number of species using successional stage	Reproduction	4	7	1	1	3	2		
	Feeding	5	7	7	7	4	3		

Figure 4. Species Orientation to Unique and Special Habitat Components

Life Form 6

X = Reproduction O = Feeding

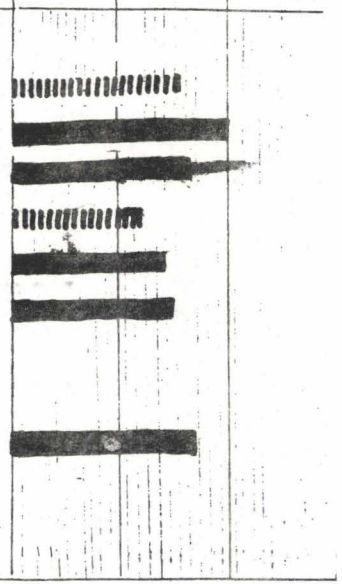
SPECIES CODE	COMMON NAME	Rivers	Streams	Sloughs	Lakes	Reservoirs (>2 ac.)	Ponds (<2 ac.)	Intermittent Ponds, Bogs	Marshes: Large	Marshes: Small	Marshes: Tule	Marshes: Sedge	Marshes: Decid-ous	Cliff	Cave	Rims	Talus	SNAGS	DOWN MATERIAL	No. of unique and/or special habitat components USED: Reproducing	No. of unique and/or special habitat components USED: Feeding
PHNU	Poor-will													XO		XO	XO			3	3
CHMI	Common Night Hawk													XO		XO				2	2
MYTO	Townsend's Solitaire													XO		XO	XO			3	3
ERDO	Porcupine													X	X	X	O		X	4	1
No. of species Using unique-Special habitat components	Reproducing													4	1	4	2		1		
	Feeding													3	0	3	3		0		

FIGURE 5. Vulnerability Ratings of Species

Life Form 6

Page 1 of 1

Code	Species	Reproductive Orientation 1/ No. of Successional Stages Used (1)	No. of Plant Communities Used (2)	1 + 2 (3)	3/2 (4)	Feeding Orientation No. of Successional Stages Used (5)	No. of Plant Communities Used (6)	5 + 6 (7)	Vulnerability Score 2/ 4 + 7 (8)
PHNU	Poor Will	2	1	3	1.5	6	5	11	12.5
CAMI	Common Nighthawk	4	4	8	4.0	6	8	14	18.0
MYTO	Townsend's Solitaire	6	3	9	4.5	6	4	10	14.5
VECE	Orange-crowned Warbler	1	2	3	1.5	3	2	5	6.5
VERU	Nashville Warbler	1	4	5	2.5	3	4	7	9.5
MELI	Lincoln's Sparrow	2	3	5	2.5	5	3	8	10.5
ERDO	Porcupine	2	3	5	2.5	4	8	12	14.5



1/ Reproductive orientation is weighted doubly to the feeding orientation; this is done by dividing the sum of columns 1 and 2 (= column 3) by 2. The results are shown in column 4.

2/ Vulnerability score is derived by adding columns 4 and 7.

3/ Species of special interest listed (rated) in Appendix 2.

Figure 1 Relative Degree of Use by the Life Form to Indicated Plant Communities and Successional Stages

Life Form No. 7

NOTE: Only those species known to reproduce in Area 2 are shown on the various life form tables.

Total number in life form equals 28 species.

Reproduction Orientation ▬

Feeding Orientation XXXXXX

PLANT COMMUNITY	DRY MEADOW	MOIST MEADOW	OTHER GRASS DOMINANT	SAGE-BITTER-BRUSH DOMINANT	OTHER BRUSH & SHRUB DOMINANT	Douglas-Fir Dominant	Hemlock-Cedar	ASPEN	RIPARIAN-DECIDUOUS	PONDEROSA PINE	MIXED CONIFER	True FIR	LODGEPOLE PINE	SUB-ALPINE Species	ALPINE MEADOW	NUMBER OF SPECIES REPRODUCING & FEEDING
SUCCESSIONAL STAGES 1/	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	
	1 8	1 12	1 10	5 9	20 25	8 11	2 3	16 21	21 25	5 7	10 13	1 3	2 3	5 6	1 4	
OLD (160 + years)						5 9	1 2	NATURAL ROTATION AGE		4 7	6 10	1 2	NATURAL ROTATION AGE	4 6	CLIMAX SUCCESSIONAL STAGES	
MATURE (80 - 159 years)						7 11	2 3	13 19	16 21	5 7	8 12	1 2		4 6		
YOUNG (40 - 79 years)			CLIMAX SUCCESSIONAL STAGES			7 11	2 3	14 20	17 22	5 7	8 13	1 3	2 3	4 6		
POLE - SAPLING (11 - 39 years)						8 11	2 3	16 21	19 23	5 7	10 13	1 3	2 3	5 6		
BRUSH - SEEDLING (0 - 10 years)				5 9	20 25	8 11	2 3	15 20	20 24	5 7	10 13	1 3	1 2	5 6		
GRASS - FORB	1 8	1 12	1 10	0 5	1 13	0 6	0 1	1 12	2 14	0 7	0 7	0 2	0 2	1 4	1 4	

NOTE: Low use of a certain successional stage of a plant community indicates low use of that stage by the life form as a whole. A particular species within the life form may be highly dependent on that one stage. For more detail see Figures 2 and 3.

The number above each ba indicates number of species using this successional stage within this plant community.

1/ FRED HALL

Figure 2. Species Orientation to Plant Communities

Life Form 7

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Dry Meadow	Moist Meadow	Other Grass Dominant	Sage-bitterbrush dominant	Other Brush & Shrub Dom	Douglas-Fir Dom.	Hemlock-Cedar	Aspen	Riparian Deciduous	Ponderosa Pine	Mixed Conifer	TRUE Fir	Lodgepole Pine	Subalpine Species	Alpine Meadow	Number of plant Communities USED: Reproduction	Feeding
NYNY	Black-crowned Night Heron		O						XO	XO							2	3
BUSW	Swainson's Hawk	XO	O	XO		XO											3	4
ARAL	Black-chinned Hummingbird		O			XO			XO	XO		XO					4	5
STCA	Calliope Hummingbird	O	O	O	O	XO	XO		XO	XO	O	XO			XO	O	6	12
TYTY	Eastern Kingbird				O	XO			XO	XO							3	4
EMTR	Willow Flycatcher				O	O			XO	XO		O	O	XO			3	7
PIPI	Black-billed Magpie	O	O	O	O	XO			XO	XO	XO	O	O	O	O	O	4	13
DUCA	Gray Catbird					XO			XO	XO							3	3
ORMO	Sage Thrasher				XO	XO			O	O							2	4
TUMI	American Robin	O	O	O		XO	XO	O	XO	XO	XO	XO	XO	XO	XO	O	9	14
CAUS	Swainson's Thrush					O	XO	XO	XO	XO		XO			XO		6	7
LALU	Loggerhead Shrike	O	O	O	XO	XO			O	O	O						2	8
DENI	Black-throated Gray Warbler					XO	XO		XO	O		XO					4	5
OPTO	MacGillivray's Warbler					XO			XO	XO							3	3
WIPU	Wilson's Warbler					XO	XO	XO	XO	XO		XO					6	6
Number of species using plant community	Reproduction																	
	Feeding																	

Figure 2. Species Orientation to Plant Communities

Life Form 7

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Dry Meadow	Moist Meadow	Other Grass Dominant	Sage-bitterbrush dominant	Other Brush & Shrub Dom.	Douglas-Fir Dom.	Hemlock-Cedar	Aspen	Riparian Deciduous	Ponderosa Pine	Mixed Conifer	TRUE Fir	Lodgepole Pine	Subalpine Species	Alpine Meadow	Number of plant Communities USED: Reproduction	Feeding
XAXA	Yellow-headed Blackbird		O							XO							1	2
AGPH	Red-winged Blackbird		XO							XO							2	2
EUCY	Brewer's Blackbird		O	O		XO	O		XO	XO	XO	XO					5	8
MOAT	Brown-headed Cowbird		O	O		O	O		XO	XO	XO	XO					4	8
PAAM	Lazuli Bunting				XO	XO			XO	XO							4	4
CATR	American Goldfinch	O		O		XO			O	XO							2	5
PIER	Rufous-sided Towhee					XO	XO		O	XO		XO					4	5
AMBE	Sage Sparrow				XO	O											1	2
SPPA	Chipping Sparrow	O	O	O		XO	XO		XO	XO	XO	XO					6	9
SPBR	Brewer's Sparrow	O		O	XO	XO											2	4
ZOLE	White-crowned Sparrow					O	O		O	O					XO	XO	2	6
PAIL	Fox Sparrow					XO				XO					XO		3	3
MEME	Song Sparrow					XO	XO			XO		O					3	4
Number of species using plant community	Reproduction	1	1	1	5	20	8	2	16	21	5	10	1	2	5	1		
	Feeding	8	12	10	9	25	11	3	21	25	7	13	3	3	6	4		

Figure 3. Species Orientation to Successional Stages

Life Form 7

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Grass-Forb	Brush-Seedling (0-10 yrs.)	Pole-Sapling (11-39 yrs.)	Young (40-79 yrs.)	Mature (80-159 yrs.)	Old (160+ years)	Number of Successional Stages USED	
								Reproduction	Feeding
NYNY	Black-crowned Night Heron	X O	X O	X O	X	X		5	3
BUSW	Swainson's Hawk	X O	X O	X O	X O	X O	X O	6	6
ARAL	Black-Chinned Hummingbird	O	X O	X O	O	O	O	2	6
STCA	Calliope Hummingbird	O	X O	X O	O	O	O	2	6
TYTY	Eastern Kingbird		X O	X O	X O	X O	X O	5	5
EMTR	Willow Flycatcher		O	X O	X O			2	3
PIPI	Blackbilled Magpie	O	X O	X O	X O	X O	X O	5	6
DUCA	Gray Catbird		X O	X O	X O	X O		4	4
ORMO	Sage Thrasher		X O	X O	X O	X O	X O	5	5
TUMI	American Robin	O	X O	X O	X O	X O	X O	5	6
CAUS	Swainson's Thrush		X O	X O	X O	X O	X O	5	5
LALU	Loggerhead Shrike	O	X O	X O	X O	X O	X O	5	6
DENI	Black-throated Gray Warbler		X O	X O	X O	X O	X O	5	5
OPTO	MacGillivray's Warbler		X O	X O	X O	X O		4	4
WIPU	Wilson's Warbler		X O	X O	X O	X O		4	4
Number of species using successional stage	Reproduction								
	Feeding								

Figure 3. Species Orientation to Successional Stages

Life Form 7

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Grass-Forb	Brush-Seedling (0-10 yrs.)	Pole-Sapling (11-39 yrs.)	Young (40-79 yrs.)	Mature (80-159 yrs.)	Old (160+ years)	Number of Successional Stages USED: Reproduction	Feeding
XAXA	Yellow-headed Blackbird	O	X					1	1
AGPH	Red-winged Blackbird	X O	X O					2	2
EUCY	Brewer's Blackbird	O	X O	X O	X O	X O	X O	5	6
MOAT	Brown-headed Cowbird	O	X O	X O	X O	X O	O	4	6
PAAM	Lazuli Bunting	O	X O	X O	X O	X O	X O	5	6
CATR	American Goldfinch	O	X O	X O	X O	X O		4	5
PIER	Rufous-sided Towhee		X O	X O	X O	X O	X O	5	5
AMBE	Sage Sparrow		X O	X O	X O	X O	X O	5	5
SPPA	Chipping Sparrow	O	X O	X O	X O	X O	X O	5	6
SPBR	Brewer's Sparrow	O	X O	X O	X O	X O	X O	5	6
ZOLE	White-crowned Sparrow	X O	X O	X O	X O	X O	X O	6	6
PAIL	Fox Sparrow		X O	X O	X O	X O	X O	5	5
MEME	Song Sparrow		X O	X O	X O	X O		4	4
Number of species using successional stage	Reproduction	4	27	26	24	23	16		
	Feeding	16	27	26	25	24	19		

Figure 4. Species Orientation to Unique and Special Habitat Components

Life Form 7

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Rivers	Streams	Sloughs	Lakes	Reservoirs (>2 ac.)	Ponds (<2 ac.)	Intermittent Ponds, Bogs	Marshes: Large	Marshes: Small	Marshes: Tule	Marshes: Sedge	Marshes: Deciduous	Cliff	Cave	Rims	Talus	SNAGS	DOWN MATERIAL	No. of unique and/or special habitat components USED: Reproducing	Feeding
NYNY	Black-crowned Night Heron	XO	XO	XO	XO	XO	O	O	XO	XO	XO	O	O							8	12
BUSW	Swainson's Hawk													O		O	O			O	3
PIPI	Blackbilled Magpie													O		O	O			O	3
DUCA	Gray Catbird																		O	O	1
ORMO	Sage Thrasher													O		O	O			O	3
LALU	Loggerhead Shrike													O		O	O			O	3
WIPU	Wilson's Warbler																		XO	1	1
XAXA	Yellow-headed Blackbird	O	O	O	O	O	O	XO	XO	XO	XO	O	XO							5	12
AGPH	Red-winged Blackbird	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO							12	12
PIER	Rufous-sided Towhee																		XO	1	1
ZOLE	White-crowned Sparrow													O		O	O			O	3
No. of species using unique-special habitat components	Reproducing	2	2	2	2	2	1	2	3	3	3	1	2	0	0	0	0	0	2		
	Feeding	3	3	3	3	3	3	3	3	3	3	3	3	5	0	5	5	0	3		

FIGURE 5. Vulnerability Ratings of Species

Life Form 7 (Nests in bushes, feeds on the ground, in water and in the air.)

Page 1 of 3

Letter Code	Species	Reproductive Orientation 1/ No. of Successional Stages Used (1)	No. of Plant Communities Used (2)	1 + 2 (3)	3/2 (4)	Feeding Orientation No. of Successional Stages Used (5)	No. of Plant Communities Used (6)	5 + 6 (7)	Vulnerability Score 2/ 4 + 7 (8)	Vulnerability Rating 3/ High -12 to +3 / Medium (2) +3 to +18 / Low +18 to +31
	Birds									
MYNY	Black-crowned Night Heron	5	2	7	3.5	3	3	6	9.5	
BUSW	Swainson's Hawk	6	3	9	4.5	6	4	10	14.5	
ARAL	Black-chinned Hummingbird	2	4	6	3.0	6	5	11	14.0	
STCA	Calliope Hummingbird	2	6	8	4.0	6	12	18	22.0	
TYVE	Eastern Kingbird	5	3	8	4.0	5	4	9	13.0	
EMTR	Willow Flycatcher	2	3	5	2.5	3	7	10	12.5	
PIPI	Black-billed Magpie	5	4	9	4.5	6	13	19	23.5	
DUCA	Gray Catbird	4	3	7	3.5	4	3	7	10.5	
ORMO	Sage Thrasher	5	2	7	3.5	5	4	9	12.5	

1/ Reproductive orientation is weighted doubly to the feeding orientation; this is done by dividing the sum of columns 1 and 2 (= column 3) by 2. The results are shown in column 4.

2/ Vulnerability score is derived by adding columns 4 and 7.

3/ Species of special interest listed (rated) in Appendix 2.

FIGURE 5. Vulnerability Ratings of Species

Life Form 7

Page 2 of 3

Letter Code	Species	Reproductive Orientation 1/ No. of Successional Stages Used (1)	No. of Plant Communities Used (2)	1 + 2 (3)	3/2 (4)	Feeding Orientation No. of Successional Stages Used (5)	No. of Plant Communities Used (6)	5 + 6 (7)	Vulnerability Score 2/ 4 + 7 (8)	Vulnerability Rating 3/ High -12 to +3 / Medium (2) +3 to +18 / Low +18 to +33
TUMI	American Robin	5	9	14	7.0	6	14	20	27.0	
CAUS	Swainson's Thrush	5	6	11	5.5	5	7	12	17.5	
LALU	Loggerhead Shrike	5	2	7	3.5	6	8	14	17.5	
DENI	Black-throated Gray Warbler	5	4	9	4.5	5	5	10	14.5	
OPTO	MacGillivray's Warbler	4	3	7	3.5	4	3	7	10.5	
WIPU	Wilson's Warbler	4	6	10	5.0	4	6	10	15.0	
XAXA	Yellow-headed Blackbird	1	1	2	1.0	1	2	3	4.0	
AGPH	Red-winged Blackbird	2	2	4	2.0	2	2	4	6.0	
EUCY	Brewer's Blackbird	5	5	10	5.0	6	8	14	19.0	
MOAT	Brown-headed Cowbird	4	4	8	4.0	6	8	14	18.0	
PAAM	Lazuli Bunting	5	4	9	4.5	6	4	10	14.5	
SPTR	American Goldfinch	4	2	6	3.0	5	5	10	13.0	

1/ Reproductive orientation is weighted doubly to the feeding orientation; this is done by dividing the sum of columns 1 and 2 (= column 3) by 2. The results are shown in column 4.

2/ Vulnerability score is derived by adding columns 4 and 7.

3/ Species of special interest listed (rated) in Appendix 2.

FIGURE 5. Vulnerability Ratings of Species

Life Form 7

Page 3 of 3

Letter Code	Species	Reproductive Orientation 1/ No. of Successional Stages Used (1)	No. of Plant Communities Used (2)	1 + 2 (3)	3/2 (4)	Feeding Orientation No. of Successional Stages Used (5)	No. of Plant Communities Used (6)	5 + 6 (7)	Vulnerability Score 2/ 4 + 7 (8)	Vulnerability Rating 3/ High -12 to +3	Medium (2) +3 to +18	Low +18 to +33
PIER	Rufous-sided Towhee	5	4	9	4.5	5	5	10	14.5			
AMBE	Sage Sparrow	5	1	6	3.0	5	2	7	10.0			
SPPA	Chipping Sparrow	5	6	11	5.5	6	9	15	20.5			
SPBR	Brewer's Sparrow	5	2	7	3.5	6	4	10	13.5			
ZOLE	White-crowned Sparrow	6	2	8	4.0	6	6	12	16.0			
PAIL	Fox Sparrow	5	3	8	4.0	5	3	8	12.0			
MEME	Song Sparrow	4	3	7	3.5	4	4	8	11.5			

1/ Reproductive orientation is weighted doubly to the feeding orientation; this is done by dividing the sum of columns 1 and 2 (= column 3) by 2. The results are shown in column 4.

2/ Vulnerability score is derived by adding columns 4 and 7.

3/ Species of special interest listed (rated) in Appendix 2.

Figure 1 Relative Degree of Use by the Life Form to Indicated Plant Communities and Successional Stages

Life Form No. 8

NOTE: Only those species known to reproduce in Area 2 are shown on the various life form tables.

Total number in life form equals 4 species.

Reproduction Orientation ■

Feeding Orientation XXXXXX

PLANT COMMUNITY	DRY MEADOW	MOIST MEADOW	OTHER GRASS DOMINANT	SAGE-BITTER BRUSH DOMINANT	OTHER BRUSH & SHRUB DOMINANT	Douglas-Fir Dominant	Hemlock-Cedar	ASPEN	RIPARIAN-DECIDUOUS	PONDEROSA PINE	MIXED CONIFER	True FIR	LODGEPOLE PINE	SUB-ALPINE Species	ALPINE MEADOW	
SUCCESSIONAL STAGES 1/	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	NUMBER OF SPECIES REPRODUCING & FEEDING
	0 0	0 0	0 1	2 2	3 3	0 0	0 0	1 2	2 4	0 2	1 2	0 0	0 0	0 0	0 0	
OLD (160 + years)								NATURAL ROTATION AGE		0 2	1 2		NATURAL ROTATION AGE		CLIMAX SUCCESSIONAL STAGES	
MATURE (80 - 159 years)								1 2	2 4	0 2	1 2					
YOUNG (40 - 79 years)			CLIMAX SUCCESSIONAL STAGES					1 2	2 4	0 2	1 2					
POLE - SAPLING (11 - 39 years)								1 2	2 4	0 2	1 2					
BRUSH - SEEDLING (0 - 10 years)				2 2	3 3			1 2	2 4	0 2	1 2					
GRASS - FORB			0 1	0 1	0 1			0 0	0 1	0 1	0 1					

NOTE: Low use of a certain successional stage of a plant community indicates low use of that stage by the life form as a whole. A particular species within the life form may be highly dependent on that one stage. For more detail see Figures 2 and 3.

The number above each bar indicates number of species using this successional stage within this plant community.

1/ FRED HALL

Figure 2. Species Orientation to Plant Communities

Life Form 8

X = Reproduction O = Feeding

CODE	COMMON NAME	Other Grass Dominant	Sage-bitterbrush dominant	Other Brush & Shrub Dom	Douglas-Fir Dom.	Hemlock-Cedar	Aspen	Riparian Deciduous	Ponderosa Pine	Mixed Conifer	TRUE Fir	Lodgepole Pine	Subalpine Species	Alpine Meadow	Number of plant Communities USED: Reproduction	Feeding
EMOB	Dusky Flycatcher	O	X O	X O				O	O	X O					3	6
PSMI	Bushtit		X O	X O				O	O						2	4
DEPE	Yellow Warbler						X O	X O							2	2
ICVI	Yellow-breasted Chat			X O			O	X O		O					2	4
Number of species using plant community	Reproduction	0	2	3			1	2	0	1						
	Feeding	1	2	3			2	4	2	2						

Figure 3. Species Orientation to Successional Stages

Life Form 8

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Grass-Forb	Brush-Seedling (0-10 yrs.)	Pole-Sapling (11-39 yrs.)	Young (40-79 yrs.)	Mature (80-159 yrs.)	Old (160+ years)	Number of Successional Stages USED	
								Reproduction	Feeding
EMOB	Dusky Flycatcher	O	X O	X O	X O	X O	X O	5	6
PSMI	Bushtit		X O	X O	X O	X O	X O	5	5
DEPE	Yellow Warbler		X O	X O	X O	X O		4	4
ICVI	Yellow-breasted Chat		X O	X O	X O	X O	O	4	5
Number of species using successional stage	Reproduction	O	4	4	4	4	2		
	Feeding	1	4	4	4	4	3		

FIGURE 5. Vulnerability Ratings of Species

Life Form 8 (Nests in bushes, feeds in trees and bushes or in the air.)

Letter Code	Species	Reproductive Orientation 1/ No. of Successional Stages Used (1)	No. of Plant Communities Used (2)	1 + 2 (3)	3/2 (4)	Feeding Orientation No. of Successional Stages Used (5)	No. of Plant Communities Used (6)	5 + 6 (7)	Vulnerability Score 2/ 4 + 7 (8)	Vulnerability Rating 3/ High -12 to +3	Medium (2) +3 to +18	Low +18 to +33
	Birds											
EMOB	Dusky Flycatcher	5	3	8	4.0	6	6	12	16.0			
PSMI	Bushtit	5	2	7	3.5	5	4	9	16.0			
DEPE	Yellow Warbler	4	2	6	3.0	4	2	6	9.0			
ICVI	Yellow-Breasted Chat	4	2	6	3.0	5	4	9	12.0			

1/ Reproductive orientation is weighted doubly to the feeding orientation; this is done by dividing the sum of columns 1 and 2 (= column 3) by 2. The results are shown in column 4.

2/ Vulnerabilityscore is derived by adding columns 4 and 7.

3/ Species of special interest listed (rated) in Appendix 2.

Figure 1 Relative Degree of Use by the Life Form to Indicated Plant Communities and Successional Stages

Life Form No. 9

NOTE: Only those species known to reproduce in Area 2 are shown on the various life form tables.

Total number in life form equals 4 species.

Reproduction Orientation ■

Feeding Orientation XXXXXX

PLANT COMMUNITY / SUCCESSIONAL STAGES 1/	DRY MEADOW R F	MOIST MEADOW R F	OTHER GRASS DOMINANT R F	SAGE-BITTER BRUSH DOMINANT R F	OTHER BRUSH & SHRUB DOMINANT R F	Douglas-fir Dominant R F	Hemlock-Cedar R F	ASPEN NATURAL ROTATION AGE R F	RIPARIAN-DECIDUOUS NATURAL ROTATION AGE R F	PONDEROSA PINE R F	MIXED CONIFER R F	True FIR R F	LODGEPOLE PINE NATURAL ROTATION AGE R F	SUB-ALPINE Species R F	ALPINE MEADOW R F	NUMBER OF SPECIES REPRODUCING & FEEDING
	0 0	0 0	0 0	0 0	2 2	0 0	0 0	4 4	4 4	0 2	0 2	0 0	0 0	0 0	0 0	
OLD (160 + years)										0 2	0 2					
MATURE (80 - 159 years)								4 4	4 4	0 2	0 2					
YOUNG (40 - 79 years)	CLIMAX SUCCESSIONAL STAGES							4 4	4 4	0 2	0 2				CLIMAX SUCCESSIONAL STAGES	
POLE - SAPLING (11 - 39 years)								3 4	3 4	0 2	0 2					
BRUSH - SEEDLING (0 - 10 years)					1 2			3 4	3 4	0 2	0 2					
GRASS - FORB					0 1			0 2	0 2	0 1	0 1					

NOTE: Low use of a certain successional stage of a plant community indicates low use of that stage by the life form as a whole. A particular species within the life form may be highly dependent on that one stage. For more detail see Figures 2 and 3.

The number above each ba: indicates number of species using this successional stage within this plant community.

1/ FRED HALL

Figure 2. Species Orientation to Plant Communities

Life Form 9

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Dry Meadow	Moist Meadow	Other Grass Dominant	Sage-bitterbrush dominant	Other Brush & Shrub Dom	Douglas-Fir Dom.	Hemlock-Cedar	Aspen	Riparian Deciduous	Ponderosa Pine	Mixed Conifer	TRUE Fir	Lodgepole Pine	Subalpine Species	Alpine Meadow	Number of plant Communities USED: Reproduction	Feeding
BOCE	Cedar Waxwing					X O			XO	XO							3	3
SERUT	American Redstart								XO	XO							2	2
ICGA	Northern Oriole								XO	XO	O	O					2	4
CAMEXI	House Finch					X O			XO	XO	O	O					3	5
Number of species using plant community	Reproduction					2			4	4	0	0						
	Feeding					2			4	4	2	2						

Figure 3. Species Orientation to Successional Stages

Life Form 9

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Grass-Forb	Brush-Seedling (0-10 yrs.)	Pole-Sapling (11-39 yrs.)	Young (40-79 yrs.)	Mature (80-159 yrs.)	Old (160+ years)	Number of Successional Stages USED	
								Reproduction	Feeding
BOCE	Cedar Waxwing		X O	X O	X O	X O		4	4
SERUT	American Redstart	O	X O	X O	X O	X O		4	5
ICGA	Northern Oriole		X O	X O	X O	X O		4	4
CAMEXI	House Finch	O	O	O	X O	X O	O	2	6
Number of species using successional stage	Reproduction	0	3	3	4	4	0		
	Feeding	2	4	4	4	4	1		

FIGURE 5. Vulnerability Ratings of Species

Life Form 9 (Nests primarily in deciduous trees, feeds, in trees and bushes.)

Letter Code	Species	Reproductive Orientation 1/ No. of Successional Stages Used (1)	Reproductive Orientation 1/ No. of Plant Communities Used (2)	1 + 2 (3)	3/2 (4)	Feeding Orientation No. of Successional Stages Used (5)	Feeding Orientation No. of Plant Communities Used (6)	5 + 6 (7)	Vulnerability Score 2/ 4 + 7 (8)	Vulnerability Rating 3/ High -12 to +3	Medium (2) +3 to +18	Low +18 to +33
	Birds											
BOCE	Cedar Waxwing	4	3	7	3.5	4	3	7	10.5			
SERUT	American Redstart	4	2	6	3.0	5	2	7	10.0			
ICGA	Northern Oriole	4	2	6	3.0	4	4	8	11.0			
CAMEXI	House Finch	2	3	5	2.5	6	5	11	13.5			

1/ Reproductive orientation is weighted doubly to the feeding orientation; this is done by dividing the sum of columns 1 and 2 (= column 3) by 2. The results are shown in column 4.

2/ Vulnerability score is derived by adding columns 4 and 7.

3/ Species of special interest listed (rated) in Appendix _____.

Figure 1 Relative Degree of Use by the Life Form to Indicated Plant Communities and Successional Stages

Reproduction Orientation ■

Life Form No. 10

NOTE: Only those species known to reproduce in Area 2 are shown on the various life form tables.

Feeding Orientation XXXXXX

Total number in life form equals 14 species.

PLANT COMMUNITY	DRY MEADOW	MOIST MEADOW	OTHER GRASS DOMINANT	SAGE-BITTER BRUSH DOMINANT	OTHER BRUSH & SHRUB DOMINANT	Douglas-Fir Dominant	Hemlock-Cedar	ASPEN	RIPARIAN-DECIDUOUS	PONDEROSA PINE	MIXED CONIFER	True FIR	LODGEPOLE PINE	SUB-ALPINE Species	ALPINE MEADOW	NUMBER OF SPECIES REPRODUCING & FEEDING
SUCCESSIONAL STAGES 1/	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	
	0 0	0 0	0 0	0 0	1 1	10 12	9 10	1 5	2 6	6 13	13 14	11 11	9 11	11 12	0 0	
OLD (160 + years)						10 12	9 10	NATURAL ROTATION AGE		6 13	13 14	11 11	NATURAL ROTATION AGE	11 12	CLIMAX SUCCESSIONAL STAGES	
MATURE (80 - 159 years)						10 12	9 10	1 5	2 6	6 13	13 14	11 11		11 12		
YOUNG (40 - 79 years)	CLIMAX SUCCESSIONAL STAGES					6 11	5 9	1 4	2 5	5 12	8 13	7 10	6 10	6 11		
POLE - SAPLING (11 - 39 years)						2 7	1 6	0 5	0 6	3 8	3 9	3 8	2 8	2 8		
BRUSH - SEEDLING (0 - 10 years)						0 4	0 4	0 3	0 3	0 3	0 4	0 4	0 4	0 4		
GRASS - FORB						0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1		

NOTE: Low use of a certain successional stage of a plant community indicates low use of that stage by the life form as a whole. A particular species within the life form may be highly dependent on that one stage. For more detail see Figures 2 and 3.

The number above each bar indicates number of species using this successional stage within this plant community.

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Figure 2. Species Orientation to Plant Communities

Life Form 10

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Dry Meadow	Moist Meadow	Other Grass Dominant	Sage-bitterbrush dominant	Other Brush & Shrub Dom	Douglas-Fir Dom.	Hemlock-Cedar	Aspen	Riparian Deciduous	Ponderosa Pine	Mixed Conifer	TRUE Fir	Lodgepole Pine	Subalpine Species	Alpine Meadow	Number of plant Communities USED: Reproduction	Feeding
EMDI	Western Flycatcher						XO	XO		XO		XO	XO	XO	XO		7	7
NUBO	Olive-sided Flycatcher						XO	XO	O	O	XO	XO	XO	O	O		5	9
NUCO	Clark's Nutcracker						O	XO			O	O			XO		2	5
RESA	Golden-crowned Kinglet						XO	XO	O		O	XO	XO	XO	XO		6	8
RECA	Ruby-crowned Kinglet						O	O	O		O	XO	XO	XO	XO		4	8
DECO	Yellow-rumped Warbler						XO	XO	O	O	O	XO	XO	XO	XO		6	9
DETO	Townsend's Warbler						XO	XO			O	XO	XO	O	XO		5	7
DEOC	HERMIT WARBLER						XO				XO	XO					3	3
PILU	Western Tanager						XO	XO	XO	XO	XO	XO	XO	XO	XO		9	9
LOCUR	Red Crossbill						XO	XO			O	XO	XO	XO	XO		6	7
LOLE	WHITE-WINGED CROSSBILL						XO	XO			O	XO	XO	XO	XO		6	7
SCGRI	Western Gray Squirrel					XO					XO	XO					3	3
TAHU	Red Squirrel									O	XO	XO	XO	XO	XO		5	6
TADO	Chickaree						XO			O	XO	XO	XO	XO	XO		6	7
Number of species using plant community	Reproduction					1	10	9	1	2	6	13	11	9	11			
	Feeding					1	12	10	5	6	13	14	11	11	12			

Figure 3. Species Orientation to Successional Stages

Life Form 10

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Grass-Forb	Brush-Seedling (0-10 yrs.)	Pole-Sapling (11-39 yrs.)	Young (40-79 yrs.)	Mature (80-159 yrs.)	Old (160+ years)	Number of Successional Stages USED	
								Reproduction	Feeding
EMDI	Western Flycatcher		O	O	X O	X O	X O	3	5
NUBO	Olive-sided Flycatcher	O	O	X O	X	X O	X O	4	5
NUCO	Clark's Nutcracker				O	X O	X O	2	3
RESA	Golden-crowned Kinglet		O	O	X O	X O	X O	3	5
RECA	Ruby-crowned Kinglet			O	O	X O	X O	2	4
DECO	Yellow-rumped Warbler			O	X O	X O	X O	3	4
DETO	Townsend's Warbler				O	X O	X O	2	3
DEOC	HERMIT WARBLER				O	X O	X O	2	3
PILU	Western Tanager		O	O	X O	X O	X O	3	5
LOCUR	Red Crossbill				O	X O	X O	2	3
LOLE	WHITE-WINGED CROSSBILL				O	X O	X O	2	3
SCGRI	Western Gray Squirrel			O	X O	X O	X O	3	4
TAHU	Red Squirrel			X O	X O	X O	X O	4	4
TADO	Chickaree			X O	X O	X O	X O	4	4
Number of species using successional stage	Reproduction	0	0	3	8	14	14		
	Feeding	1	4	9	13	14	14		

Figure 4. Species Orientation to Unique and Special Habitat Components

Life Form 10

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Rivers	Streams	Sloughs	Lakes	Reservoirs (>2 ac.)	Ponds (<2 ac.)	Intermittent Ponds, Bogs	Marshes: Large	Marshes: Small	Marshes: Tule	Marshes: Sedge	Marshes: Deciduous	Cliff	Cave	Rims	Talus	SNAGS	DOWN MATERIAL	No. of unique and/or special habitat components USED: Reproducing	No. of unique and/or special habitat components USED: Feeding
EMDI	WESTERN FLYCATCHER													O		O	O			O	3
NUBO	OLIVE-SIDED FLYCATCHER													O		O	O			O	3
SCGRI	WESTERN GRAY SQUIRREL																	X	X	2	O
TAHU	RED SQUIRREL																	X	XO	2	1
TADO	CHICKAREE																	X	XO	2	1
No. of species using unique-special habitat components	Reproducing													O		O	O	3	3		
	Feeding													2		2	2	O	2		

FIGURE 5. Vulnerability Ratings of Species

Life Form 10 (Nests primarily in conifers, feeds in trees and bushes, or in the air.)

Letter Code	Species	Reproductive Orientation 1/ No. of Successional Stages Used (1)	Reproductive Orientation 1/ No. of Plant Communities Used (2)	1 + 2 (3)	3/2 (4)	Feeding Orientation No. of Successional Stages Used (5)	Feeding Orientation No. of Plant Communities Used (6)	5 + 6 (7)	Vulnerability Score 2/ 4 + 7 (8)	Vulnerability Rating 3/ High -12 to +3 / Medium (2) +3 to +18 / Low +18 to +33
	Birds									
EMDI	Western Flycatcher	3	7	10	5.0	5	7	12	17.0	
NUBO	Olive-sided Flycatcher	4	5	9	4.5	5	9	14	18.5	
NUCO	Clark's Nutcracker	2	2	4	2.0	3	5	8	10.0	
RESA	Golden-crowned Kinglet	3	6	9	4.5	5	8	13	17.5	
RECA	Ruby-crowned Kinglet	2	4	6	3.0	4	8	12	15.0	
DECO	Yellow-rumped Warbler	3	6	9	4.5	4	9	13	17.5	
DETO	Townsend's Warbler	2	5	7	3.5	3	7	10	13.5	
DEOC	HERMIT WARBLER	2	3	5	2.5	3	3	6	8.5	
PILU	Western Tanager	3	9	12	6.0	5	9	14	20.0	
LOCUR	Red Crossbill	2	6	8	4.0	3	7	10	14.0	
LOLE	WHITE-WINGED CROSSBILL	2	6	8	4.0	3	7	10	14.0	
	Mammals									
SCGRI	Western Gray Squirrel	3	3	6	3.0	4	3	7	10.0	
TAHU	Red Squirrel	4	5	9	4.5	4	6	10	14.5	
TADO	Chickaree	4	6	10	5.0	4	7	11	16.0	

1/ Reproductive orientation is weighted doubly to the feeding orientation; this is done by dividing the sum of columns 1 and 2 (= column 3) by 2. The results are shown in column 4.

2/ Vulnerability score is derived by adding columns 4 and 7.

3/ Species of special interest listed (rated) in Appendix 2.

Figure 1 Relative Degree of Use by the Life Form to Indicated Plant Communities and Successional Stages

Life Form No. 11

NOTE: Only those species known to reproduce in Area 2 are shown on the various life form tables.

Total number in life form equals 24 species.

Reproduction Orientation ■

Feeding Orientation XXXXXX

PLANT COMMUNITY	DRY MEADOW	MOIST MEADOW	OTHER GRASS DOMINANT	SAGE-BITTER BRUSH DOMINANT	OTHER BRUSH & SHRUB DOMINANT	Douglas-Fir Dominant	Hemlock-Cedar	ASPEN	RIPARIAN-DECIDUOUS	PONDEROSA PINE	MIXED CONIFER	True FIR	LODGEPOLE PINE	SUB-ALPINE Species	ALPINE MEADOW	NUMBER OF SPECIES REPRODUCING & FEEDING
SUCCESSIONAL STAGES 1/	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	
	0 5	0 5	0 4	0 0	2 5	13 17	11 14	8 16	14 18	11 19	19 19	19 19	14 17	12 17	0 3	
OLD (160 + years)						10 16	8 13	NATURAL ROTATION AGE		10 19	16 18	16 18	NATURAL ROTATION AGE	11 16	CLIMAX SUCCESSIONAL STAGES	
MATURE (80 - 159 years)						13 17	11 14	8 16	14 18	11 19	19 19	19 19		12 17		
YOUNG (40 - 79 years)			CLIMAX SUCCESSIONAL STAGES			9 15	7 13	6 16	12 17	7 19	13 18	13 18	10 16	8 16		
POLE - SAPLING (11 - 39 years)						7 14	5 11	5 15	8 16	4 18	10 16	9 16	7 14	6 14		
BRUSH - SEEDLING (0 - 10 years)				0 0	2 5	0 14	0 11	2 13	3 15	0 15	1 15	1 15	1 13	1 13		
GRASS - FORB	0 5	0 5	0 4	0 0	1 3	0 9	0 6	1 8	1 12	0 11	0 11	0 11	0 9	0 9	0 3	

NOTE: Low use of a certain successional stage of a plant community indicates low use of that stage by the life form as a whole. A particular species within the life form may be highly dependent on that one stage. For more detail see Figures 2 and 3.

The number above each bar indicates number of species using this successional stage within this plant community.

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Figure 2. Species Orientation to Plant Communities

Life Form 11

X = Reproduction 0 = Feeding

SPECIES CODE	COMMON NAME	Dry Meadow	Moist Meadow	Other Grass Dominant	Sage-bitterbrush dominant	Other Brush & Shrub Dom	Douglas-Fir Dom.	Hemlock-Cedar	Aspen	Riparian Deciduous	Ponderosa Pine	Mixed Conifer	TRUE Fir	Lodgepole Pine	Subalpine Species	Alpine Meadow	Number of plant Communities USED: Reproduction	Feeding
ACGE	Goshawk						XO	XO		O	O	XO	XO	O	O		4	8
ACST	Sharp-shinned Hawk						XO	XO	O	O	O	XO	XO	XO	O		5	9
ACCO	Cooper's Hawk						XO	XO	O	XO	XO	XO	XO	O	O	O	6	10
FACO	Merlin	O	O	O			XO	XO	O	O	O	XO	XO	XO	XO	O	6	13
ZEMA	Mourning Dove	O	O	O		X			X	X							3	3
ASOT	Long-eared Owl		O			O			XO	XO	O	XO	XO	XO	XO		6	9
SERU	Rufous Hummingbird	O	O	O			O	O		XO		XO	XO	XO	XO	O	5	11
TYVE	Western Kingbird					X O			XO	XO							3	3
EMHA	Hammond's Flycatcher						XO	XO	XO		XO	XO	XO	XO	XO		8	8
COSO	Western Wood PEWEE						XO	XO		XO	XO	XO	XO	XO	XO		8	8
PECA	Gray Jay						XO	XO	O			XO	XO	XO	XO		6	7
CYST	Steller's Jay						XO	XO	O	XO	XO	XO	XO				6	7
COBR	Common Crow					O	O		O	XO	O	XO	XO				3	7
Number of species using plant community	Reproduction																	
	Feeding																	

Figure 2. Species Orientation to Plant Communities

Life Form 11

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Dry Meadow	Moist Meadow	Other Grass Dominant	Sage-bitterbrush dominant	Other Brush & Shrub Dom	Douglas-Fir Dom.	Hemlock-Cedar	Aspen	Riparian Deciduous	Ponderosa Pine	Mixed Conifer	TRUE Fir	Lodgepole Pine	Subalpine Species	Alpine Meadow	Number of plant Communities USED: Reproduction	Feeding
IXNA	Varied Thrush						XO	XO				XO	XO	XO	XO		6	6
VISO	Solitary Vireo						XO	O	O	O	O	XO	XO	XO	O		4	9
VIOL	Red-eyed Vireo					O			XO	XO	O						2	4
VIGI	Warbling Vireo					O			XO	XO	O						2	4
PHME	Black-headed Grosbeak								XO	XO	XO	XO	XO	O	O		5	7
HEVE	Evening Grosbeak						XO	XO	O	XO	XO	XO	XO	XO	XO		8	9
CACAS	Cassin's Finch	O	O							XO	XO		XO	XO	XO		5	7
PIEN	Pine Grosbeak						O	O			XO	XO	XO	XO	XO		5	7
CAPI	Pine Siskin	O		O			O		O	O	XO	XO	XO	XO	XO		5	10
LACI	Hoary Bat						XO	XO	XO	XO	XO	XO	XO	XO	XO		9	9
LABO	RED BAT						XO				XO	XO					3	3
Number of species using plant community	Reproduction	O	O	O	O	2	13	11	8	14	11	19	19	14	12	O		
	Feeding	5	5	4	O	5	17	14	16	18	19	19	19	17	17	3		

Figure 3. Species Orientation to Successional Stages

Life Form 11

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Grass-Forb	Brush-Seedling (0-10 yrs.)	Pole-Sapling (11-39 yrs.)	Young (40-79 yrs.)	Mature (80-159 yrs.)	Old (160+ years)	Number of Successional Stages USED: Reproduction	Number of Successional Stages USED: Feeding
ACGE	Goshawk		O		O	X O	X O	2	4
ACST	Sharp-shinned Hawk		O	X O	X O	X O	O	3	5
ACCO	Cooper's Hawk	O	O	O	X O	X O	O	2	6
FACO	Merlin	O	O	O	O	X O	X O	2	6
ZEMA	Mourning Dove	X O	X O	X	X	X		5	2
ASOT	Long-eared Owl	O	O	O	X O	X O	X O	3	6
SERU	Rufous Hummingbird	O	X O	X	X	X O	X	5	3
TYVE	Western Kingbird	O	X O	X O	X O	X O		4	5
EMHA	Hammond's Flycatcher		O	O	O	X O	X O	2	5
COSO	Western Wood PEWEE		O	O	X O	X O	X O	3	5
PECA	Gray Jay		O	X	X O	X O	O	3	4
CYST	Steller's Jay	O	O	X O	X O	X O	X O	4	6
COBR	Common Crow	O	O	X O	X O	X O	X O	4	6
Number of species using successional stage	Reproduction								
	Feeding								

Figure 3. Species Orientation to Successional Stages

Life Form 11

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Grass-Forb	Brush-Seedling (0-10 yrs.)	Pole-Sapling (11-39 yrs.)	Young (40-79 yrs.)	Mature (80-159 yrs.)	Old (160+ years)	Number of Successional Stages USED	
								Reproduction	Feeding
IXNA	Varied Thrush		O	X O	X O	X O	X O	4	5
VISO	Solitary Vireo			X O	X O	X O	X O	4	4
VIOL	Red-eyed Vireo		O	X O	X O	X O	X O	4	5
VIGI	Warbling Vireo		O	X O	X O	X O	X O	4	5
PHME	Black-headed Grosbeak	O		O	O	X O	X O	2	5
HEVE	Evening Grosbeak	O		O	O	X O	X O	2	5
CACAS	Cassin's Finch	O	O	O	X O	X O	X O	3	6
PIEN	Pine Grosbeak			O	O	X O	X O	2	4
CAPI	Pine Siskin	O	O	X O	X O	X O	X O	4	6
LACI	Hoary Bat	O	O	X O	X O	X O	X O	4	6
LABO	RED BAT	O	O	X O	X O	X O	X O	4	6
Number of species using successional stage	Reproduction	1	3	14	18	24	19		
	Feeding	14	20	20	22	23	21		

Figure 4. Species Orientation to Unique and Special Habitat Components

Life Form 11

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Rivers	Streams	Sloughs	Lakes	Reservoirs (>2 ac.)	Ponds (<2 ac.)	Intermittent Ponds, Bogs	Marshes: Large	Marshes: Small	Marshes: Tule	Marshes: Sedge	Marshes: Deciduous	Cliff	Cave	Rims	Talus	SNAGS	DOWN MATERIAL	No. of unique and/or special habitat components USED: Reproducing	No. of unique and/or special habitat components USED: Feeding
FACO	MERLIN													O		O	O			O	3
EMHA	HAMMOND'S FLYCATCHER													XO		XO	XO			3	3
COSO	WESTERN WOOD PEWEE																O			O	1
PECA	GRAY JAY													O		O	O			O	3
CYST	STELLER'S JAY													O		O	O			O	3
CAPI	PINE SISKIN													O		O	O			O	3
No. of species using unique-special habitat components	Reproducing													1		1	1				
	Feeding													5		5	6				

Figure 1 **Relative Degree of Use by the Life Form to Indicated Plant Communities and Successional Stages**

Life Form No. 12

Reproduction Orientation ■

Feeding Orientation XXXXXX

NOTE: Only those species known to reproduce in Area 2 are shown on the various life form tables.

Total number in life form equals 7 species.

PLANT COMMUNITY	DRY MEADOW	MOIST MEADOW	OTHER GRASS DOMINANT	SAGE-BITTER BRUSH DOMINANT	OTHER BRUSH & SHRUB DOMINANT	Douglas-Fir Dominant	Hemlock-Cedar	ASPEN	RIPARIAN-DECIDUOUS	PONDEROSA PINE	MIXED CONIFER	True FIR	LODGEPOLE PINE	SUB-ALPINE Species	ALPINE MEADOW	
SUCCESSIONAL STAGES 1/	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	NUMBER OF SPECIES REPRODUCING & FEEDING
	2 4	0 6	2 4	2 3	0 3	3 4	1 4	3 4	5 5	5 4	4 5	0 4	1 4	0 3	0 3	
OLD (160 + years)						2 4	0 4	NATURAL ROTATION AGE		5 4	4 5	0 4	NATURAL ROTATION AGE	0 3	CLIMAX SUCCESSIONAL STAGES	
MATURE (80 - 159 years)						3 4	1 4	3 4	5 4	5 4	4 5	0 4		0 3		
YOUNG (40 - 79 years)	CLIMAX SUCCESSIONAL STAGES					1 4	0 4	1 3	1 3	1 3	1 4	0 3	0 4	0 3		
POLE - SAPLING (11 - 39 years)						1 3	0 3	1 3	1 3	1 3	1 3	0 3	0 3	0 3		
BRUSH - SEEDLING (0 - 10 years)				2 3	0 3	1 3	0 3	1 4	1 4	2 4	2 4	0 4	0 3	0 3		
GRASS - FORB	2 4	0 6	2 4	2 3	0 3	1 4	0 4	1 4	1 5	2 4	2 5	0 4	0 4	0 3	0 3	

NOTE: Low use of a certain successional stage of a plant community indicates low use of that stage by the life form as a whole. A particular species within the life form may be highly dependent on that one stage. For more detail see Figures 2 and 3.

The number above each bar indicates number of species using this successional stage within this plant community.

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Figure 2. Species Orientation to Plant Communities

Life Form 12

X = Reproduction 0 = Feeding

SPECIES CODE	COMMON NAME	Dry Meadow	Moist Meadow	Other Grass Dominant	Sage-bitterbrush dominant	Other Brush & Shrub Dom	Douglas-Fir Dom.	Hemlock-Cedar	Aspen	Riparian Deciduous	Ponderosa Pine	Mixed Conifer	True Fir	Lodgepole Pine	Subalpine Species	Alpine Meadow	Number of plant Communities USED: Reproduction	Feeding
ARHE	GREAT BLUE HERON		O						X	XO							2	2
BUJA	RED-TAILED HAWK	O	O	O	O	O	XO	O	XO	XO	XO	XO	O	O	O	O	5	15
AQCH	Golden Eagle	XO	O	XO	XO	O	O	O	O	O	XO	XO	O	O	O	O	5	15
HALE	Bald Eagle	O	O	O					O	XO	XO	O	O				2	8
PAHA	Osprey									X	X	X					3	O
BUVI	Great Horned Owl	XO	O	XO	XO	O	XO	O	XO	XO	XO	XO	O	O	O	O	8	15
STNE	GREAT GRAY OWL		O				XO	XO				O		XO			3	5
Number of species using plant community	Reproduction	2	0	2	2	0	3	1	3	5	5	4	0	1	0	0		
	Feeding	4	6	4	3	3	4	4	4	5	4	5	4	4	3	3		

Figure 3. Species Orientation to Successional Stages

Life Form 12

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Grass-Forb	Brush-Seedling (0-10 yrs.)	Pole-Sapling (11-39 yrs.)	Young (40-79 yrs.)	Mature (80-159 yrs.)	Old (160+ years)	Number of Successional Stages USED: Reproduction	Feeding
ARHE	Great Blue Heron	O				X		1	1
BUJA	Red-Tailed Hawk	O	O	O	O	X O	X O	2	6
AQCH	Golden Eagle	X O	X O	O	O	X O	X O	4	6
HALE	Bald Eagle	O	O			X O	X O	2	4
PAHA	Osprey					X	X	2	0
BUVI	Great Horned Owl	X O	X O	X O	X O	X O	X O	6	6
STNE	Great Gray Owl	O			O	X O	O	1	4
Number of species using successional stage	Reproduction	2	2	1	1	7	5		
	Feeding	6	4	3	4	5	5		

Figure 4. Species Orientation to Unique and Special Habitat Components

Life Form 12

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Rivers	Streams	Sloughs	Lakes	Reservoirs (>2 ac.)	Ponds (<2 ac.)	Bogs	Marshes: Large	Marshes: Small	Marshes: Tule	Marshes: Sedge	Marshes: Deciduous	Cliff	Cave	Rims	Talus	SNAGS	DOWN MATERIAL	No. of unique and/or special habitat components USED: Reproducing	No. of unique and/or special habitat components USED: Feeding
ARHE	GREAT BLUE HERON	XO	XO	XO	XO	XO	O		XO	X	X	X	X							10	7
BUJA	RED-TAILED HAWK													O		O				0	2
AQCH	GOLDEN EAGLE													XO		XO	O	O		2	4
HALE	BALD EAGLE	O	O	O	O	O			O					O		O		XO		1	9
PAHA	OSPREY	O	O	O	O	O			O									X		1	6
BUVI	GREAT HORNED OWL								O				O	X		X		X		3	2
STNE	GREAT GRAY OWL																	X		1	0
No. of species with unique-special habitat components	Reproducing	1	1	1	1	1	0	0	1	1	1	1	1	2	0	2	0	4	0		
	Feeding	3	3	3	3	3	1	0	4	0	0	0	1	3	0	3	1	2	0		

FIGURE 5. Vulnerability Ratings of Species

Life Form 12 (Nests on very thick branches, feeds on the ground - or in water.)

Letter Code	Species	Reproductive Orientation 1/ No. of Successional Stages Used (1)	No. of Plant Communities Used (2)	1 + 2 (3)	3/2 (4)	Feeding Orientation No. of Successional Stages Used (5)	No. of Plant Communities Used (6)	5 + 6 (7)	Vulnerability Score 2/ 4 + 7 (8)	Vulnerability Rating 3/ High -12 to +3	Medium (2) +3 to +18	Low +18 to +33
	Birds											
ARHE	Great Blue Heron	1	2	3	1.5	1	2	3	4.5			
BUJA	Red-tailed Hawk	2	5	7	3.5	6	15	21	24.5			
AQCH	Golden Eagle	4	5	9	4.5	6	15	21	25.5			
HALE	Bald Eagle	2	2	4	2.0	4	8	12	14.0			
PAHA	Osprey	2	3	5	2.5	0	0	0	2.5			
BUVI	Great Horned Owl	6	8	14	7.0	6	15	21	28.0			
STRE	Great Gray Owl	1	3	4	2.0	4	5	9	11.0			

1/ Reproductive orientation is weighted doubly to the feeding orientation; this is done by dividing the sum of columns 1 and 2 (= column 3) by 2. The results are shown in column 4.

2/ Vulnerabilityscore is derived by adding columns 4 and 7.

3/ Species of special interest listed (rated) in Appendix 2.

Figure 2. Species Orientation to Plant Communities

Life Form 13

X = Reproduction 0 = Feeding

SPECIES CODE	COMMON NAME	Dry Meadow	Moist Meadow	Other Grass Dominant	Sage-bitterbrush dominant	Other Brush & Shrub Dom.	Douglas-Fir Dom.	Hemlock-Cedar	Aspen	Riparian Deciduous	Ponderosa Pine	Mixed Conifer	TRUE Fir	Lodgepole Pine	Subalpine Species	Alpine Meadow	Number of plant Communities USED: Reproduction	Feeding
COAU	Common Flicker					0	XO	0	XO	XO	XO	XO	XO				6	8
DRPI	Pileated Woodpecker						XO	XO			XO	XO	XO	0	0		5	7
MELE	Lewis' Woodpecker		0	0		0	XO			XO	XO	XO	XO				5	8
SPVA	Yellow-bellied Sapsucker						XO		XO	XO	XO	XO	XO				6	6
SPTH	Williamson's Sapsucker						XO	XO			XO	XO	XO	X	XO		7	6
PIVI	Hairy Woodpecker						XO				XO	XO	XO	XO	XO		6	6
PIPU	Downy Woodpecker								XO	XO							2	2
PIAL	White-headed Woodpecker						XO				XO	XO					3	3
PIAR	Black-backed 3-toed Woodpecker						XO	XO				XO	XO	XO	0		5	6
PITR	Northern 3-toed Woodpecker						XO	XO						XO	XO		4	4
SICA	White-breasted Nuthatch						XO				XO	XO					3	3
SICAN	Red-breasted Nuthatch						XO	XO			0	XO	XO	XO	XO		6	7
SIPY	Pygmy Nuthatch						XO		0		XO	XO					3	4
Number of species using plant community	Reproduction	0	0	0	0	0	12	5	3	4	9	11	8	5	4	0		
	Feeding	0	1	1	0	2	12	6	4	4	10	11	8	5	6	0		

Figure 3. Species Orientation to Successional Stages

Life Form 13

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Grass-Forb	Brush-Seedling (0-10 yrs.)	Pole-Sapling (11-39 yrs.)	Young (40-79 yrs.)	Mature (80-159 yrs.)	Old (160+ years)	Number of Successional Stages USED	
								Reproduction	Feeding
COAU	Common Flicker	O	O	O	X O	X O	X O	3	6
DRPI	Pileated Woodpecker					X O	X O	2	2
MELE	Lewis' Woodpecker	O	O		X O	X O	X O	3	5
SPVA	Yellow-bellied Sapsucker				X O	X O	X O	3	3
SPTH	Williamson's Sapsucker					X O	X O	2	2
PIVI	Hairy Woodpecker				X O	X O	X O	3	3
PIPU	Downy Woodpecker				X O	X O	X O	3	3
PIAL	White-headed Woodpecker					X O	X O	2	2
PIAR	Black-backed 3-toed Woodpecker				X O	X O	X O	3	3
PITR	Northern 3-toed Woodpecker				X O	X O	X O	3	3
SICA	White-breasted Nuthatch					X O	X O	2	2
SICAN	Red-breasted Nuthatch				X O	X O	X O	3	3
SIPY	Pigmy Nuthatch					X O	X O	2	2
Number of species using successional stage	Reproduction	0	0	0	8	13	13		
	Feeding	2	2	1	8	13	13		

Figure 4. Species Orientation to Unique and Special Habitat Components

Life Form 13

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Rivers	Streams	Sloughs	Lakes	Reservoirs (>2 ac.)	Ponds (<2 ac.)	Intermittent Ponds, Bogs	Marshes: Large	Marshes: Small	Marshes: Tule	Marshes: Sedge	Marshes: Deciduous	Cliff	Cave	Rims	Talus	SNAGS	DOWN MATERIAL	No. of unique and/or special habitat components USED: Reproducing	No. of unique and/or special habitat components USED: Feeding
COAU	Common Flicker																	XO	0	1	2
DRPI	Pileated Woodpecker																	XO	0	1	2
MELE	Lewis' Woodpecker																	XO		1	1
SPVA	Yellow-bellied Sapsucker																	XO	XO	2	2
SPTH	Williamson's Sapsucker																	XO	0	1	2
PIVI	Hairy Woodpecker																	XO	0	1	2
PIPU	Downy Woodpecker																	XO		1	1
PIAL	White-headed Woodpecker																	XO	0	1	2
PIAR	Black-backed 3-toed Woodpecker																	XO	0	1	2
PITR	Northern 3-toed Woodpecker																	XO	0	1	2
SICA	White-breasted Nuthatch																	X		1	0
SICAN	Red-breasted Nuthatch																	X		1	0
SIPY	Pygmy Nuthatch																	X		1	0
No. of species using unique-special habitat components	Reproducing																	13	1		
	Feeding																	10	8		

FIGURE 5. Vulnerability Ratings of Species

Life Form 13 (Excavates own hole feeds in trees, brush, or air.)

Letter Code	Species	Reproductive Orientation 1/ No. of Successional Stages Used (1)	Reproductive Orientation 1/ No. of Plant Communities Used (2)	1 + 2 (3)	3/2 (4)	Feeding Orientation No. of Successional Stages Used (5)	Feeding Orientation No. of Plant Communities Used (6)	5 + 6 (7)	Vulnerability Score 2/ 4 + 7 (8)	Vulnerability Rating 3/ High -12 to +3 / Medium (2) +3 to +18 / Low +18 to +33
	Birds									
COAU	Common Flicker	3	6	9	4.5	6	8	14	18.5	
DRPI	Pileated Woodpecker	2	5	7	3.5	2	7	9	12.5	
MELE	Lewis' Woodpecker	3	5	8	4.0	5	8	13	17.0	
SPVA	Yellow-bellied Sapsucker	3	6	9	4.5	3	6	9	13.5	
SPTH	Williamson's Sapsucker	2	7	9	4.5	2	6	8	12.5	
PIVI	Hairy Woodpecker	3	6	9	4.5	3	6	9	13.5	
PIPU	Downy Woodpecker	3	2	5	2.5	3	2	5	7.5	
PIAL	White-headed Woodpecker	2	3	5	2.5	2	3	5	7.5	
PIAR	Black backed 3-toed Woodpecker	3	5	8	4.0	3	6	9	13.0	
PITR	Northern 3-toed Woodpecker	3	4	7	3.5	3	4	7	10.5	
SICA	White-breasted Nuthatch	2	3	5	2.5	2	3	5	7.5	
SICAN	Red-breasted Nuthatch	3	6	9	4.5	3	7	10	14.5	
SIPY	Pygmy Nuthatch	2	3	5	2.5	2	4	6	8.5	

1/ Reproductive orientation is weighted doubly to the feeding orientation; this is done by dividing the sum of columns 1 and 2 (= column 3) by 2. The results are shown in column 4.

2/ Vulnerability score is derived by adding columns 4 and 7.

3/ Species of special interest listed (rated) in Appendix 2.

Figure 1 Relative Degree of Use by the Life Form to Indicated Plant Communities and Successional Stages

Life Form No. 14

NOTE: Only those species known to reproduce in Area 2 are shown on the various life form tables.

Total number in life form equals 39 species.

Reproduction Orientation ■

Feeding Orientation XXXXXX

PLANT COMMUNITY	DRY MEADOW	MOIST MEADOW	OTHER GRASS DOMINANT	SAGE-BITTER-BRUSH DOMINANT	OTHER BRUSH & SHRUB DOMINANT	Douglas-Fir Dominant	Hemlock-Cedar	ASPEN	RIPARIAN-DECIDUOUS	PONDEROSA PINE	MIXED CONIFER	True FIR	LODGEPOLE PINE	SUB-ALPINE Species	ALPINE MEADOW
SUCCESSIONAL STAGES 1/	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F
	0 7	0 17	0 7	0 4	2 11	17 20	12 14	14 19	19 24	23 22	27 26	12 12	4 7	7 7	0 3
OLD (160 + years)						17 18	12 13	NATURAL ROTATION AGE		23 18	27 24	12 12	NATURAL ROTATION AGE	7 7	CLIMAX SUCCESSIONAL STAGES
MATURE (80 - 159 years)						16 14	10 12	14 13	19 16	23 14	24 20	11 12		7 7	
YOUNG (40 - 79 years)			CLIMAX SUCCESSIONAL STAGES			9 7	4 6	12 2	11 5	13 4	14 14	6 6	3 5	2 4	
POLE - SAPLING (11 - 39 years)						0 5	0 4	0 2	0 4	0 2	0 6	0 3	0 4	0 3	
BRUSH - SEEDLING (0 - 10 years)				0 4	0 7	0 10	0 4	0 17	0 17	0 18	0 15	0 2	0 1	0 2	
GRASS - FORB	0 7	0 16	0 7	0 4	0 7	0 10	0 4	0 17	0 17	0 18	0 15	0 2	0 1	0 2	0 3

NUMBER OF SPECIES REPRODUCING & FEEDING

NOTE: Low use of a certain successional stage of a plant community indicates low use of that stage by the life form as a whole. A particular species within the life form may be highly dependent on that one stage. For more detail see Figures 2 and 3.

The number above each ba indicates number of species using this successional stage within this plant community.

1/ FRED HALL

Figure 2. Species Orientation to Plant Communities

Life Form 14

X = Reproduction 0 = Feeding

SPECIES CODE	COMMON NAME	Dry Meadow	Moist Meadow	Other Grass Dominant	Sage-bitterbrush dominant	Other Brush & Shrub Dom	Douglas-Fir Dom.	Hemlock-Cedar	Aspen	Riparian Deciduous	Ponderosa Pine	Mixed Conifer	TRUE Fir	Lodgepole Pine	Subalpine Species	Alpine Meadow	Number of plant Communities USED	
																	Reproduction	Feeding
PLVE	WESTERN RED-BACKED SALAMANDER						X O	X O				X O	X O				4	4
AISP	Wood Duck									X							1	0
BUIS	Barrow's Goldeneye									X							1	0
LOCU	Hooded Merganser									X							1	0
MEMER	Common Merganser									X	X						2	0
FASP	American Kestrel	0	0	0	0	0	X O		X O		X O	X O					4	9
TYAL	barn Owl		0	0	0					X O	X O	X O	X O				4	7
OTAS	Screech Owl		0						X O	X O							2	3
OTFL	Flammulated Owl					0			X O		X O	X O					3	4
GLGN	Pygmy Owl	0	0			0	0		X O	X O	X O	X O					4	8
STOC	SPOTTED OWL						X O	X O				X O	X O				4	4
AEAC	Saw-whet Owl						X O	X O	0	X O	X O	X O	X O	0			6	8
CHVA	Vaux's Swift		0				X O	X O		0		X O	X O		X O		5	7
Number of species using plant community	Reproduction																	
	Feeding																	

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Figure 2. Species Orientation to Plant Communities

Life Form 14

X = Reproduction 0 = Feeding

SPECIES CODE	COMMON NAME	Dry Meadow	Moist Meadow	Other Grass Dominant	Sage-bitterbrush dominant	Other Brush & Shrub Dom	Douglas-Fir Dom.	Hemlock-Cedar	Aspen	Riparian Deciduous	Ponderosa Pine	Mixed Conifer	TRUE Fir	Lodgepole Pine	Subalpine Species	Alpine Meadow	Number of plant Communities USED: Reproduction	Feeding
MYCI	Ash-throated Flycatcher	O	O	O					XO		XO						2	5
TATH	Violet-green Swallow		O				O		XO	XO	XO	O					3	6
IRBI	Tree Swallow		O				XO	O	XO	XO	XO	XO					5	7
PRSU	PURPLE MARTIN						XO		XO	XO	XO	XO					5	5
PAAT	Black-capped Chickadee					O			XO	XO							2	3
PAGA	Mountain Chickadee					O	XO	XO			XO	XO	XO	XO	XO		7	8
PAHU	BOREAL CHICKADEE					O						XO	XO				2	3
PARU	Chestnut-backed Chickadee					O	XO	XO		O		XO	XO	XO			5	7
CEFA	Brown Creeper						XO	XO		O	XO	XO					4	5
TRAE	House Wren					XO			XO	XO	XO	XO					5	5
THBE	BEWICK'S WREN					XO			XO	XO							3	3
SIME	Western Bluebird	O	O	O	O	O			X		XO	X					3	6
SICU	Mountain bluebird	O	O	O	O	O	XO	O	X		XO	X					4	8
STVU	Starling	O	O	O			XO			XO	XO	XO					4	7
Number of species using plant community	Reproduction																	
	Feeding																	

Figure 2. Species Orientation to Plant Communities

Life Form 14

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Dry Meadow	Moist Meadow	Other Grass Dominant	Sage-bitterbrush dominant	Other Brush & Shrub Dom	Douglas-Fir Dom.	Hemlock-Cedar	Aspen	Riparian Deciduous	Ponderosa Pine	Mixed Conifer	TRUE Fir	Lodgepole Pine	Subalpine Species	Alpine Meadow	Number of plant Communities USED: Reproduction	Feeding
PADO	House Sparrow	O	O	O						XO							1	4
MYLU	Little Brown BAT								O	O	XO	XO				O	2	5
MYYU	Yuma Myotis									XO							1	1
MYEV	Long-eared Myotis								O	O	XO	XO				O	2	5
MYVO	Long-legged Myotis		O						O	O	XO	XO				O	2	6
MYCA	California Myotis		O						O	O	XO	XO					2	5
LANO	Silver-haired Bat		O				XO	XO	O	O	XO	XO			XO		5	8
EPFU	Big Brown Bat		O				XO	XO	XO	O	XO	XO	XO	XO	XO		8	10
GLSA	Northern Flying Squirrel						XO	XO			XO	XO	XO	XO	XO		7	7
PRLO	Racoon		O				O		O	XO							1	4
MAAME	Marten						XO	XO				XO	XO	O	XO		5	6
MAPEN	FISHER						XO	XO		XO		XO	XO	O	XO		6	7
Number of species using plant community	Reproduction	O	O	O	O	2	17	12	14	19	23	27	12	4	7	O		
	Feeding	7	17	7	4	11	20	14	19	24	22	26	12	7	7	3		

Figure 3. Species Orientation to Successional Stages

Life Form 14

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Grass-Forb	Brush-Seedling (0-10 yrs.)	Pole-Sapling (11-39 yrs.)	Young (40-79 yrs.)	Mature (80-159 yrs.)	Old (160+ years)	Number of Successional Stages USED: Reproduction	Number of Successional Stages USED: Feeding
PLVE	WESTERN RED-BACKED SALAMANDER					X O	X O	2	2
AISP	Wood Duck					X	X	2	0
BUIS	Barrow's Goldeneye					X	X	2	0
LOCU	Hooded Merganser					X	X	2	0
MEME	Common Merganser					X	X	2	0
FASP	American Kestrel	O	O		X	X	X O	3	3
TYAL	Barn Owl	O	O			X O	X O	2	4
OTAS	Screech Owl	O	O		X	X O	X O	3	4
OTFL	Flammulated Owl	O	O		X	X O	X O	3	4
GLGN	Pygmy Owl	O	O	O	X O	X O	X O	3	6
STOC	SPOTTED OWL					O	X O	1	2
AEAC	Saw-whet Owl				X	X O	X O	3	2
CHVA	Vaux's Swift					X O	X O	2	2
Number of species using successional stage	Reproduction								
	Feeding								

Figure 3. Species Orientation to Successional Stages

Life Form 14

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Grass-Forb	Brush-Seedling (0-10 yrs.)	Pole-Sapling (11-39 yrs.)	Young (40-79 yrs.)	Mature (80-159 yrs.)	Old (160+ years)	Number of Successional Stages USED	
								Reproduction	Feeding
MYCI	Ash-throated Flycatcher	O	O			X O	X O	2	4
TATH	Violet-green Swallow	O	O		X	X	X O	3	3
IRBI	Tree Swallow	O	O		X	X	X O	3	3
PRSU	PURPLE MARTIN	O	O		X	X	X O	3	3
PAAT	Black-capped Chickadee			O	X O	X O	X O	3	4
PAGA	Mountain Chickadee			O	X O	X O	X O	3	4
PAHU	BOREAL CHICKADEE			O	X O	X O	X O	3	4
PARU	Chestnut-backed Chickadee			O	X O	X O	X O	3	4
CEFA	Brown Creeper				O	X O	X O	2	3
TRAE	House Wren	O	O		X	X	X	3	2
THBE	BEWICK'S WREN	O	O		X	X	X	3	2
SIME	Western Bluebird	O	O		X	X	X	3	2
SICU	Mountain Bluebird	O	O		X	X	X	3	2
STVU	Starling	O	O		X	X	X	3	2
Number of species using successional stage	Reproduction								
	Feeding								

Figure 3. Species Orientation to Successional Stages

Life Form 14

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Grass-Forb	Brush-Seedling (0-10 yrs.)	Pole-Sapling (11-39 yrs.)	Young (40-79 yrs.)	Mature (80-159 yrs.)	Old (160+ years)	Number of Successional Stages USED	
								Reproduction	Feeding
PADO	House Sparrow	O	O		X	X	X	3	2
MYLU	Little Brown BAT	O	O			X O	X O	2	4
MYYU	Yuma Myotis					X	X	2	0
MYEV	Long-eared Myotis	O	O			X O	X O	2	4
MYVO	Long-legged Myotis	O	O			X O	X O	2	4
MYCA	California Myotis	O	O			X O	X O	2	4
LANO	Silver-haired Bat	O	O			X O	X O	2	4
EPFU	Big Brown Bat	O	O			X O	X O	2	4
GLSA	Northern Flying Squirrel				X O	X O	X O	3	3
PRLO	Racoon	O	O			X O	X O	2	4
MAAME	Marten			O	O	X O	X O	2	4
MAPEN	Fisher			O	O	X O	X O	2	4
Number of species using successional stage	Reproduction	O	O	O	19	38	39		
	Feeding	22	22	7	9	24	28		

Figure 4. Species Orientation to Unique and Special Habitat Components

Life Form 14

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Rivers	Streams	Sloughs	Lakes	Reservoirs (>2 ac.)	Ponds (<2 ac.)	Intermittent Ponds, Bogs	Marshes: Large	Marshes: Small	Marshes: Tule	Marshes: Sedge	Marshes: Deciduous	Cliff	Cave	Rims	Talus	SNAGS	DOWN MATERIAL	No. of unique and/or special habitat components USED: Reproducing	No. of unique and/or special habitat components USED: Feeding
PLVE	WESTERN RED-BACKED SALAMANDER																		XO	1	1
AISP	Wood Duck	X	X	XO	XO	X	XO		XO	XO	XO	XO	XO					X		12	8
BUIS	Barrow's Goldeneye	XO	XO	XO	XO	XO	XO											X		7	6
LOCU	Hooded Merganser	XO	XO	XO	XO	XO	XO											X		7	6
MEMER	Common Merganser	XO	XO	XO														X		4	3
FASP	American Kestrel																	X		1	0
TYAL	Barn Owl													XO		XO	O	X		3	3
OTAS	Screech Owl																	X		1	0
OTFL	Flammulated Owl																	X		1	0
GLGN	Pygmy Owl																	X		1	0
STOC	SPOTTED OWL																	X		1	0
AEAC	Saw-whet Owl																	X		1	0
CHVA	Vaux's Swift																	X		1	0
No. of species using unique-special habitat components	Reproducing																				
	Feeding																				

Figure 4. Species Orientation to Unique and Special Habitat Components

Life Form 14

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Rivers	Streams	Sloughs	Lakes	Reservoirs (>2 ac.)	Ponds (<2 ac.)	Intermittent Ponds, Bogs	Marshes: Large	Marshes: Small	Marshes: Tule	Marshes: Sedge	Marshes: Deciduous	Cliff	Cave	Rims	Talus	SNAGS	DOWN MATERIAL	No. of unique and/or special habitat components USED: Reproducing	No. of unique and/or special habitat components USED: Feeding
MYCI	Ash-throated Flycatcher																	X		1	0
TATH	Violet-green Swallow																	X		1	0
IRBI	Tree Swallow													O		O	O	X		1	3
PRSU	PURPLE MARTIN																	X		1	0
PAAT	Black-capped Chickadee																	X		1	0
PAGA	Mountain Chickadee																	X		1	0
PAHU	BOREAL CHICKADEE																	X		1	0
PARU	Chestnut-backed Chickadee																	X		1	0
CEFA	Brown Creeper																	X		1	0
TRAE	House Wren																	X	XO	2	1
THBE	BEWICK'S WREN																	X	X	2	0
SIME	Western Bluebird																	X		1	0
SICU	Mountain bluebird																	X		1	0
STVU	Starling																	X		1	0
No. of species using unique-special habitat components	Reproducing																				
	Feeding																				

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Figure 4. Species Orientation to Unique and Special Habitat Components

Life Form 14

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Rivers	Streams	Sloughs	Lakes	Reservoirs (>2 ac.)	Ponds (<2 ac.)	Intermittent Ponds, Bogs	Marshes: Large	Marshes: Small	Marshes: Tule	Marshes: Sedge	Marshes: Deciduous	Cliff	Cave	Rims	Talus	SNAGS	DOWN MATERIAL	No. of unique and/or special habitat components USED: Reproducing	No. of unique and/or special habitat components USED: Feeding
PADO	House Sparrow																	X		1	0
MYLU	Little Brown BAT													O		O	O	X		1	3
MYYU	Yuma Myotis													O		O	O	X		1	3
MYEV	Long-eared Myotis													O		O	O	X		1	3
MYVO	Long-legged Myotis																	X		1	0
MYCA	California Myotis																	X		1	0
LANO	Silver-haired Bat														X					1	0
EPFU	Big Brown Bat																	X		1	0
GLSA	Northern Flying Squirrel																	X		1	0
PRLO	Racoon																	X	0	1	1
MAAME	Marten																	X		1	0
MAPEN	FISHER																	X	0	1	1
No. of species Using Unique-Special habitat components	Reproducing	4	4	4	3	3	3	0	1	1	1	1	1	1	1	1	0	37	3		
	Feeding	3	3	4	3	2	3	0	1	1	1	1	1	5	0	5	5	0	4		

FIGURE 5. Vulnerability Ratings of Species

Life Form 14 (Nests in a hole made by another species or in a naturally occurring hole - feeds on the ground, in water, or in the air.)

Letter Code	Species	Reproductive Orientation 1/ No. of Successional Stages Used (1)	Reproductive Orientation 1/ No. of Plant Communities Used (2)	1 + 2 (3)	3/2 (4)	Feeding Orientation No. of Successional Stages Used (5)	Feeding Orientation No. of Plant Communities Used (6)	5 + 6 (7)	Vulnerability Score 2/ 4 + 7 (8)	Vulnerability Rating 3/ High -12 to +3	Medium (2) +3 to +18	Low +18 to +33
PLVE	WESTERN RED-BACKED SALAMANDER	2	4	6	3.0	2	4	6	9.0			
AISP	Wood Duck	2	1	3	1.5	0	0	0	1.5			
BUIS	Barrow's Goldeneye	2	1	3	1.5	0	0	0	1.5			
LOCU	Hooded Merganser	2	1	3	1.5	0	0	0	1.5			
MEME	Common Merganser	2	2	4	2.0	0	0	0	2.0			
FASP	American Kestrel	3	4	7	3.5	3	9	12	15.5			
TYAL	Barn Owl	2	4	6	3.0	4	7	11	14.0			
OTAS	Screech Owl	3	2	5	2.5	4	3	7	9.5			
OTFL	Flammulated Owl	3	3	6	3.0	4	4	8	11.0			
GLGN	Pygmy Owl	3	4	7	3.5	6	8	14	17.5			
STOC	SPOTTED OWL	1	4	5	2.5	2	4	6	8.5			
AEAC	Saw-whet Owl	3	6	9	4.5	2	8	10	14.5			

1/ Reproductive orientation is weighted doubly to the feeding orientation; this is done by dividing the sum of columns 1 and 2 (= column 3) by 2. The results are shown in column 4.

2/ Vulnerability score is derived by adding columns 4 and 7.

3/ Species of special interest listed (rated) in Appendix 2.

FIGURE 5. Vulnerability Ratings of Species

Life Form: 14

Letter Code	Species	Reproductive Orientation 1/ No. of Successional Stages Used (1)	Reproductive Orientation 1/ No. of Plant Communities Used (2)	1 + 2 (3)	3/2 (4)	Feeding Orientation No. of Successional Stages Used (5)	Feeding Orientation No. of Plant Communities Used (6)	5 + 6 (7)	Vulnerability Score 2/ 4 + 7 (8)	Vulnerability Rating 3/
										High -12 to +3 / Medium (2) +3 to +18 / Low +18 to +33
MYCI	Ash-throated Flycatcher	2	2	4	2.0	4	5	9	11.0	
CHVA	Vaux's Swift	2	5	7	3.5	2	7	9	12.5	
TATH	Violet-green Swallow	3	3	6	3.0	3	6	9	12.0	
TRBI	Tree Swallow	3	5	8	4.0	3	7	10	14.0	
PRSU	PURPLE MARTIN	3	5	8	4.0	3	5	8	12.0	
PAAT	Black-capped Chickadee	3	2	5	2.5	4	3	7	9.5	
PAGA	Mountain Chickadee	3	7	10	5.0	4	8	12	17.0	
PAHU	BOREAL CHICKADEE	3	2	5	2.5	4	3	7	9.5	
PARU	Chestnut-backed Chickadee	3	5	8	4.0	4	7	11	15.0	
CEFA	Brown Creeper	2	4	6	3.0	3	5	8	11.0	
TRAE	House Wren	3	5	8	4.0	2	5	7	11.0	
THBE	BEWICK'S WREN	3	3	6	3.0	2	3	5	8.0	
SIME	Western Bluebird	3	3	6	3.0	2	6	8	11.0	
SICU	Mountain Bluebird	3	4	7	3.5	2	8	10	13.5	
STVU	Starling	3	4	7	3.5	2	7	9	12.5	
PADO	House Sparrow	3	1	4	2.0	2	4	6	8.0	

1/ Reproductive orientation is weighted doubly to the feeding orientation; this is done by dividing the sum of columns 1 and 2 (= column 3) by 2. The results are shown in column 4.

2/ Vulnerability score is derived by adding columns 4 and 7.

3/ Species of special interest listed (rated) in Appendix 2.

FIGURE 5. Vulnerability Ratings of Species

Life Form 14

Letter Code	Species	Reproductive Orientation 1/ No. of Successional Stages Used (1)	Reproductive Orientation 1/ No. of Plant Communities Used (2)	1 + 2 (3)	3/2 (4)	Feeding Orientation No. of Successional Stages Used (5)	Feeding Orientation No. of Plant Communities Used (6)	5 + 6 (7)	Vulnerability Score 2/ 4 + 7 (8)	Vulnerability Rating 3/ High -12 to +3	Medium (2) +3 to +18	Low +18 to +33
	Mammals											
MYLU	Little Brown BAT	2	2	4	2.0	4	5	9	11.0			
MYYU	Yuma Myotis	2	1	3	1.5	0	1	1	2.5			
MYEV	Long-eared Myotis	2	2	4	2.0	4	5	9	11.0			
MYVO	Long-legged Myotis	2	2	4	2.0	4	6	10	12.0			
MYCA	California Myotis	2	2	4	2.0	4	5	9	11.0			
LANO	Silver-haired Bat	2	5	7	3.5	4	8	12	15.5			
EPFU	Big Brown Bat	2	8	10	5.0	4	10	14	19.0			
GLSA	Northern Flying Squirrel	3	7	10	5.0	3	7	10	15.0			
PRLO	Racoon	2	1	3	1.5	4	4	8	9.5			
MAAM	Marten	2	5	7	3.5	4	6	10	13.5			
MAPE	Fisher	2	6	8	4.0	4	7	11	15.0			

1/ Reproductive orientation is weighted doubly to the feeding orientation; this is done by dividing the sum of columns 1 and 2 (= column 3) by 2. The results are shown in column 4.

2/ Vulnerability score is derived by adding columns 4 and 7.

3/ Species of special interest listed (rated) in Appendix 2.

Figure 1 Relative Degree of Use by the Life Form to Indicated Plant Communities and Successional Stages

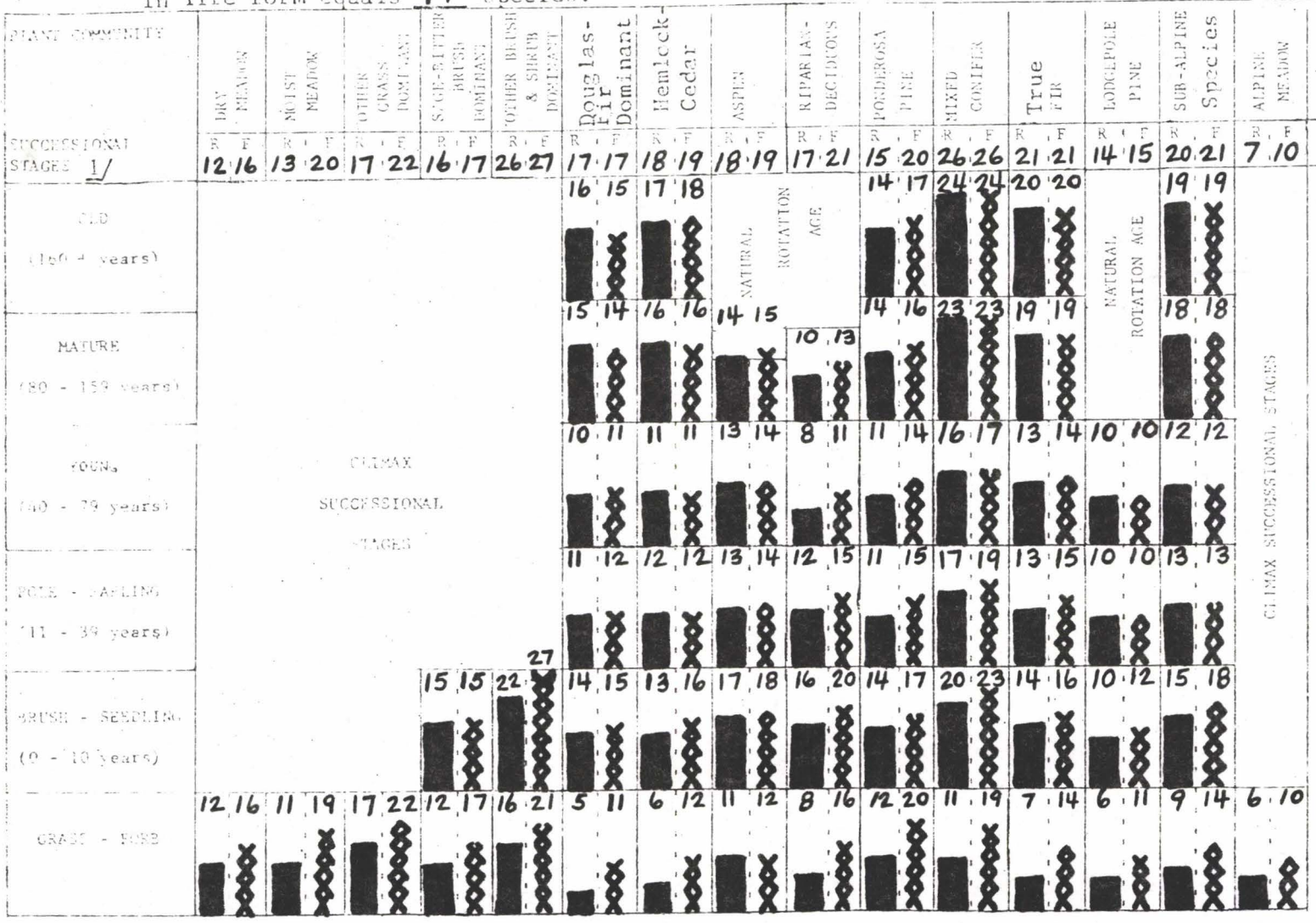
Life Form No. 15

NOTE: Only those species known to reproduce in Area 2 are shown on the various life form tables.

Total number in life form equals 44 species.

Reproduction Orientation ■

Feeding Orientation XXXXXX


PLANT COMMUNITY
DRY MEADOW
MOIST MEADOW
OTHER GRASS DOMINANT
SAGE-BITTER BRUSH DOMINANT
OTHER BRUSH & SHRUB DOMINANT
Douglas-Fir Dominant
Hemlock-Cedar
ASPEN
RIPARIAN-DECIDUOUS
PONDEROSA PINE
MIXED CONIFER
True FIR
LODGEPOLE PINE
SUB-ALPINE Species
ALPINE MEADOW
SUCCESSIONAL STAGES 1/
R F 12 16 13 20 17 22 16 17 26 27 17 17 18 19 18 19 17 21 15 20 26 26 21 21 14 15 20 21 7 10
OLD (160 + years)
MATURE (80 - 159 years)
YOUNG (40 - 79 years)
POLE - SAPLING (11 - 39 years)
BRUSH - SEEDLING (0 - 10 years)
GRASS - FORB
CLIMAX SUCCESSIONAL STAGES
NATURAL
ROTATION AGE
NUMBER OF SPECIES REPRODUCING & FEEDING

NOTE: Low use of a certain successional stage of a plant community indicates low use of that stage by the life form as a whole. A particular species within the life form may be highly dependent on that one stage. For more detail see Figures 2 and 3.

The number above each bar indicates number of species using this successional stage within this plant community.

1/ FRED HALL

Figure 2. Species Orientation to Plant Communities

Life Form 15

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Dry Meadow	Moist Meadow	Other Grass Dominant	Sage-bitterbrush dominant	Other Brush & Shrub Dom	Douglas-Fir Dom.	Hemlock-Cedar	Aspen	Riparian Deciduous	Ponderosa Pine	Mixed Conifer	TRUE Fir	Lodgepole Pine	Subalpine Species	Alpine Meadow	Number of plant Communities USED: Reproduction	Feeding
CHBO	Rubber Boa		XO				XO			O	O	XO	XO				4	6
ATCU	Burrowing Owl	XO		XO	XO												3	3
SOCI	MASKED SHREW					XO	XO	XO		XO		XO	XO		XO		7	7
SOTR	TROWBRIDGE'S SHREW					XO	XO	XO				XO	XO		XO		6	6
SOVA	Vagrant Shrew		XO			XO	XO	XO		XO		XO	XO	XO	XO		9	9
SOOB	Dusky Shrew						XO	XO		XO		XO	XO	XO	XO		7	7
NEGI	SHREW-MOLE					XO	XO	XO	XO	XO		XO	XO		XO		8	8
SCOR	Coast Mole			XO		XO			XO	XO	XO	XO	XO	XO	XO	XO	10	10
SYFL	EASTERN COTTONTAIL	O	O	O		XO			XO	XO	O						3	7
SYNU	NUTTALL'S COTTONTAIL	O	O	O	XO	XO			XO	XO	O						4	8
APRU	APLODONTIA					XO	XO	XO		XO		XO	XO				6	6
SPTO	Townsend's Ground Squirrel	XO		XO	XO												3	3
SPBE	CALIFORNIA Ground Squirrel	XO	XO	XO	XO	XO					O						5	6
Number of species using plant community	Reproduction																	
	Feeding																	

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Figure 2. Species Orientation to Plant Communities

Life Form 15

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Dry Meadow	Moist Meadow	Other Grass Dominant	Sage-bitterbrush dominant	Other Brush & Shrub Dom	Douglas-Fir Dom.	Hemlock-Cedar	Aspen	Riparian Deciduous	Ponderosa Pine	Mixed Conifer	TRUE Fir	Lodgepole Pine	Subalpine Species	Alpine Meadow	Number of plant Communities USED: Reproduction	Feeding
SPCO	Columbian Ground Squirrel		XO	XO							XO	XO					4	4
SPSA	CASCADE GOLDEN-Mantled Ground Squirrel				XO	XO			XO		XO	XO			XO	XO	7	7
SPLA	GOLDEN-MANTLED Ground Squirrel					XO			XO		XO	XO					4	4
EUMI	Least Chipmunk				XO									XO	O	O	2	4
EUTO	TOWNSEND'S CHIPMUNK					XO	XO	XO				XO	XO	XO	XO		7	7
EUAM	Yellow-pine Chipmunk								XO	XO	XO	XO			XO		5	5
EURU	REDTAIL CHIPMUNK							XO				XO	XO	XO	XO		5	5
THTA	Northern Pocket Gopher	XO	O	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO		13	14
PEPA	Great Basin Pocket Mouse	XO			XO												2	2
REME	Western Harvest Mouse	XO	O	XO	XO	XO											4	5
PEMA	Deer Mouse		XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO	14	14
ONLE	Grasshopper Mouse	XO		XO	XO												3	3
SYBO	NORTHERN BOG LEMMING															XO	1	1
PHIN	HEATHER VOLE							O						O	XO	XO	2	4
CLGA	BOREAL REDBACK VOLE						XO	XO				XO	XO	XO	XO		6	6
Number of species using plant community	Reproduction																	
	Feeding																	

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Figure 2. Species Orientation to Plant Communities

Life Form 15

X = Reproduction 0 = Feeding

SPECIES CODE	COMMON NAME	Dry Meadow	Moist Meadow	Other Grass Dominant	Sage-bitterbrush dominant	Other Brush & Shrub Dom.	Douglas-Fir Dom.	Hemlock-Cedar	Aspen	Riparian Deciduous	Ponderosa Pine	Mixed Conifer	TRUE Fir	Lodgepole Pine	Subalpine Species	Alpine Meadow	Number of plant Communities USED: Reproduction	Feeding
MIPE	MEADOW VOLE		X O	X O													2	2
MIMO	Mountain Vole	X O	X O	X O		X O			X O	X O							6	6
MILO	Longtail Vole	X O	X O	X O	X O	X O	X O	X O	X O	X O	X O	X O	X O				12	12
MIOR	OREGON VOLE	X O	X O	X O		X O	X O	X O		O		X O	X O	X O	X O		10	11
RANO	Norway Rat					X O				X O							2	2
MUMU	House Mouse		X O			X O				X O							3	3
URAM	Black Bear		O	O		O	X O	X O	O	O	O	X O	X O	X O	X O	O	6	13
URAR	GRIZZLY BEAR	O	O	X O		X O		X O				X O	X O		X O	X O	7	9
MUER	Shorttail Weasel						X O	X O		X O	X O	X O	X O	X O	X O		8	8
MUFR	Longtail Weasel	X O	X O	X O	X O	X O			X O		X O						7	7
TATA	Badger	X O	X O	X O	X O	X O			X O		X O						7	7
MEMEP	Striped Skunk		X O	X O	X O	X O			X O	X O	X O						7	7
CALAT	Coyote	O	O	O	X O	X O	X O	X O	X O	O	X O	X O	X O	X O	X O	O	10	15
CALU	GRAY WOLF			O	O				X O		X O	X O	X O				4	6
VUVUF	COMMON RED FOX								X O		X O	X O					3	3
VUVUC	CASCADE RED FOX					X O	X O	X O	X O			X O	X O	X O	X O	X O	9	9
Number of species using plant community: Reproduction		12	13	17	16	26	17	18	18	17	15	26	21	14	20	7		
Number of species using plant community: Feeding		16	20	22	17	27	17	19	19	21	20	26	21	15	21	10		

Figure 3. Species Orientation to Successional Stages

Life Form 15

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Grass-Forb		Brush-Seedling (0-10 yrs.)		Pole-Sapling (11-39 yrs.)		Young (40-79 yrs.)		Mature (80-159 yrs.)		Old (160+ years)		Number of Successional Stages USED	
														Reproduction	Feeding
CHBO	Rubber Boa		O	X	O		O		O	X	O	X	O	3	6
ATCU	Burrowing Owl	X	O	X	O	X	O	X	O	X	O	X	O	6	6
SOCI	MASKED SHREW			X	O					X	O	X	O	3	3
SOTR	TROWBRIDGE'S SHREW			X	O					X	O	X	O	3	3
SOVA	Vagrant Shrew			X	O	X	O	X	O	X	O	X	O	5	5
SOOB	Dusky Shrew									X	O	X	O	2	2
NEGI	SHREW-MOLE			X	O	X	O	X	O	X	O	X	O	5	5
SCOR	Coast Mole	X	O	X	O	X	O	X	O	X	O	X	O	6	6
SYFL	EASTERN COTTONTAIL		O	X	O									1	2
SYNU	NUTTALL'S COTTONTAIL		O	X	O	X	O	X	O			X	O	4	5
APRU	APLODONTIA		O	X	O	X	O					X	O	3	4
SPTO	Townsend's Ground Squirrel	X	O	X	O	X	O	X	O	X	O	X	O	6	6
SPBE	CALIFORNIA Ground Squirrel	X	O		O									1	2
Number of species using successional stage	Reproduction														
	Feeding														

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Figure 3. Species Orientation to Successional Stages

Life Form 15

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Grass-Forb	Brush-Seedling (0-10 yrs.)	Pole-Sapling (11-39 yrs.)	Young (40-79 yrs.)	Mature (80-159 yrs.)	Old (160+ years)	Number of Successional Stages USED: Reproduction	Feeding
SPCO	Columbian Ground Squirrel	X O	X O			X O	X O	4	4
SPSA	CASCADE GOLDEN-Mantled Ground Squirrel	X O	X O	X O	X O	X O	X O	6	6
SPLA	GOLDEN-MANTLED Ground Squirrel	X O	X O	X O	X O	X O	X O	6	6
EUMI	Least Chipmunk	X O	X O					2	2
EUTO	TOWNSEND'S CHIPMUNK	O	O			X O	X O	2	4
EUAM	Yellow-pine Chipmunk	X O	X O	X O		X O	X O	5	5
EURU	REDTAIL CHIPMUNK			X O	X O	X O	X O	4	4
THTA	Northern Pocket Gopher	X O	X O	X O	X O	X O	X O	6	6
PEPA	Great Basin Pocket Mouse	X O	X O	X O	X O	X O	X O	6	6
REME	Western Harvest Mouse	X O	X O	X O	X O	X O	X O	6	6
PEMA	Deer Mouse	X O	X O	X O	X O	X O	X O	6	6
ONLE	Grasshopper Mouse	X O	X O	X O	X O	X O	X O	6	6
SYBO	NORTHERN BOG LEMMING	X O						1	1
PHIN	HEATHER VOLE	X O	X O				X O	3	3
CLGA	BOREAL REDBACK VOLE			X O	X O	X O	X O	4	4
Number of species using successional stage	Reproduction								
	Feeding								

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Figure 3. Species Orientation to Successional Stages

Life Form 15

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Grass-Forb	Brush-Seedling (0-10 yrs.)	Pole-Sapling (11-39 yrs.)	Young (40-79 yrs.)	Mature (80-159 yrs.)	Old (160+ years)	Number of Successional Stages USED: Reproduction	Feeding
MIPE	MEADOW VOLE	X O						1	1
MIMO	Mountain Vole	X O	X O					2	2
MILO	Longtail Vole	X O	X O	X O	X O	X O	X O	6	6
MIOR	OREGON VOLE	X O	X O					2	2
RANO	Norway Rat		X O	X O				2	3
MUMU	House Mouse	X O	X O	X O				3	5
URAM	Black Bear	O	X O	X O	X O	X O	X O	5	6
URAR	GRIZZLY BEAR	X O	O			X O	X O	3	4
MUER	Shorttail Weasel	O	X O	X O	X O	X O	X O	5	6
MUFR	Longtail Weasel	X O	X O	X O	X O	X O	X O	6	6
TATA	Badger	X O	X O			X O	X O	4	4
MEMEP	Striped Skunk	X O	X O					2	2
CALAT	Coyote	X O	X O	X O	X O	X O	X O	6	6
CALU	GRAY WOLF	O	O	O	X O	X O	X O	3	6
VUVUF	COMMON RED FOX	O	X O	X O	X O	X O	X O	5	6
VUVUC	CASCADE RED FOX	O	X O	X O	X O	X O	X O	5	6
Number of species using successional stage: Reproduction		26	35	26	23	31	34		
Number of species using successional stage: Feeding		36	39	28	24	31	34		

Figure 4. Species Orientation to Unique and Special Habitat Components

Life Form 15

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Rivers	Streams	Sloughs	Lakes	Reservoirs (>2 ac.)	Ponds (<2 ac.)	Intermittent Ponds, Bogs	Marshes: Large	Marshes: Small	Marshes: Tule	Marshes: Sedge	Marshes: Deciduous	Cliff	Cave	Rims	Talus	SNAGS	DOWN MATERIAL	No. of unique and/or special habitat components USED: Reproducing	No. of unique and/or special habitat components USED: Feeding
CHBO	Rubber Boa																		XO	1	1
SOCI	MASKED SHREW																		XO	1	1
SOVA	Vagrant Shrew																XO		XO	2	2
SOOB	Dusky Shrew																XO		XO	2	2
NEGI	SHREW-MOLE																		XO	1	1
SYFL	EASTERN COTTONTAIL																		X	1	0
SYNU	NUTTALL'S COTTONTAIL																		X	1	0
APRU	APLODONTIA																		XO	1	1
SPBE	CALIFORNIA Ground Squirrel																XO			1	1
SPSA	CASCADE GOLDEN-Mantled Ground Squirrel													O		O	XO			1	3
SPLA	GOLDEN-MANTLED Ground Squirrel													O		O	XO			1	3
EUTO	TOWNSEND'S CHIPMUNK																		XO	1	1
EUAM	Yellow-pine Chipmunk																O	X	X	2	1
EURU	REDTAIL CHIPMUNK																O		O	0	2
PEMA	Deer Mouse																XO	XO	XO	3	3
SYBO	NORTHERN BOG LEMMING							XO		XO		XO	XO							4	4
No. of species using unique-Special habitat components	Reproducing																				
	Feeding																				

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Figure 4. Species Orientation to Unique and Special Habitat Components

Life Form 15

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Rivers	Streams	Sloughs	Lakes	Reservoirs (>2 ac.)	Ponds (<2 ac.)	Intermittent Ponds, Bogs	Marshes: Large	Marshes: Small	Marshes: Tule	Marshes: Sedge	Marshes: Deciduous	Cliff	Cave	Rims	Talus	SNAGS	DOWN MATERIAL	No. of unique and/or special habitat components USED: Reproducing	No. of unique and/or special habitat components USED: Feeding
PHIN	HEATHER VOLE																		X	1	0
CLGA	BOREAL REDBACK VOLE																O		XO	1	2
MIMO	Mountain Vole																		X	1	0
MILO	Longtail Vole																		O	0	1
RANO	Norway Rat																		XO	1	1
URAM	Black Bear																O		XO	1	2
URAR	GRIZZLY BEAR															O	O		O	0	3
MUER	Shorttail Weasel													O	O	O	O	O	XO	1	6
MUFR	Longtail Weasel														O			O	XO	1	3
TATA	Badger																O		O	0	2
MEMEP	Striped Skunk														O		O		XO	1	3
CALAT	Coyote													O		O	O		XO	1	4
CALU	GRAY WOLF													O		O	O		X	1	3
VUVUF	COMMON RED FOX													O		O	O		X	1	0
VUVUC	CASCADE RED FOX																O		XO	1	2
No. of species using unique-Special habitat components	Reproducing							1	0	1	0	1	1	0	0	0	6	2	23		
	Feeding							1	0	1	0	1	1	5	3	6	17	3	20		

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FIGURE 5. Vulnerability Ratings of Species

Life Form 15 (Reproduces in a burrow (underground) and feeds on or under the gound.)

Letter Code	Species	Reproductive Orientation 1/ No. of Successional Stages Used (1)	No. of Plant Communities Used (2)	1 + 2 (3)	3/2 (4)	Feeding Orientation No. of Successional Stages Used (5)	No. of Plant Communities Used (6)	5 + 6 (7)	Vulnerability Score 2/ 4 + 7 (8)	Vulnerability Rating 3/ High -12 to +3 / Medium (2) +3 to +18 / Low +18 to +3
CHBO	Rubber Boa	3	4	7	3.5	6	6	12	15.5	
ATCU	Burrowing Owl	6	3	9	4.5	6	3	9	13.5	
SOCI	MASKED SHREW	3	7	10	5.0	3	7	10	15.0	
SOTR	TROWBRIDGE'S SHREW	3	6	9	4.5	3	6	9	13.5	
SOVA	Vagrant Shrew	5	9	14	7.0	5	9	14	11.0	
SOOB	Dusky Shrew	2	7	9	4.5	2	7	9	13.5	
NEGI	SHREW-MOLE	5	8	13	6.5	5	8	13	19.5	
SCOR	Coast Mole	6	10	16	8.0	6	10	16	24.0	
SYFL	EASTERN COTTONTAIL	1	3	4	2.0	2	7	9	11.0	
SYNU	NUTTALL'S Cottontail	4	4	8	4.0	5	8	13	17.0	
APRU	APLODONTIA	3	6	9	4.5	4	6	10	14.5	
SPTO	TOWNSEND'S GROUND SQUIRREL	6	3	9	4.5	6	3	9	13.5	

1/ Reproductive orientation is weighted doubly to the feeding orientation; this is done by dividing the sum of columns 1 and 2 (= column 3) by 2. The results are shown in column 4.

2/ Vulnerability score is derived by adding columns 4 and 7.

3/ Species of special interest listed (rated) in Appendix 2.

FIGURE 5. Vulnerability Ratings of Species

Life Form: 15

Letter Code	Species	Reproductive Orientation 1/ No. of Successional Stages Used (1)	No. of Plant Communities Used (2)	1 + 2 (3)	3/2 (4)	Feeding Orientation No. of Successional Stages Used (5)	No. of Plant Communities Used (6)	5 + 6 (7)	Vulnerability Score 2/ 4 + 7 (8)
SPBE	CALIFORNIA Ground Squirrel	1	5	6	3.0	2	6	8	11.0
SPCO	COLUMBIAN Ground Squirrel	4	4	8	4.0	4	4	8	12.0
SPSA	CASCADE GOLDEN-MANTLED Ground Squirrel	6	7	13	6.5	6	7	13	19.5
SPLA	GOLDEN-MANTLED Ground Squirrel	6	4	10	5.0	6	4	10	15.0
EUMI	LEAST CHIPMUNK	2	2	4	2.0	2	4	6	8.0
EUTO	TOWNSEND'S CHIPMUNK	2	7	9	4.5	4	7	11	15.5
EUAM	YELLOW-PINE CHIPMUNK	5	5	10	5.0	5	5	10	15.0
EURU	REDTAIL CHIPMUNK	4	5	9	4.5	4	5	9	13.5
THTA	Northern Pocket Gopher	6	13	19	9.5	6	14	20	29.5
PEPA	Great Basin Pocket Mouse	6	2	8	4.0	6	2	8	12.0
REME	WESTERN HARVEST MOUSE	6	4	10	5.0	6	5	11	16.0
PEME	DEER MOUSE	6	14	20	10.0	6	14	20	30.0
ONLE	GRASSHOPPER MOUSE	6	3	9	4.5	6	3	9	13.5
SYBO	NORTHERN BOG LEMMING	1	1	2	1.0	1	1	2	3.0

Vulnerability Rating 3/ — High: -12 to +3; Medium (2): +3 to +18; Low: +18 to +33

1/ Reproductive orientation is weighted doubly to the feeding orientation; this is done by dividing the sum of columns 1 and 2 (= column 3) by 2. The results are shown in column 4.

2/ Vulnerability score is derived by adding columns 4 and 7.

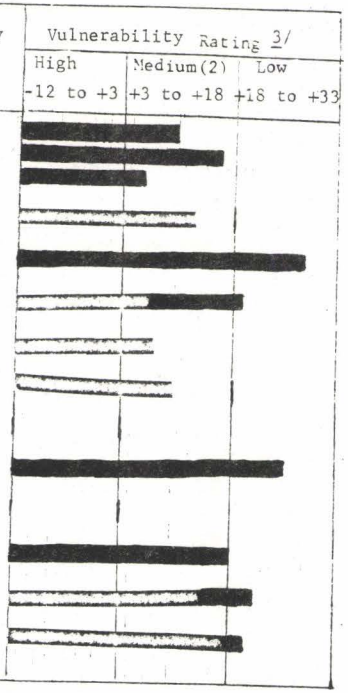
3/ Species of special interest listed (rated) in Appendix 2.

FIGURE 5. Vulnerability Ratings of Species

Life Form 15

Letter Code	Species	Reproductive Orientation 1/ No. of Successional Stages Used (1)	Reproductive Orientation 1/ No. of Plant Communities Used (2)	1 + 2 (3)	3/2 (4)	Feeding Orientation No. of Successional Stages Used (5)	Feeding Orientation No. of Plant Communities Used (6)	5 + 6 (7)	Vulnerability Score 2/ 4 + 7 (8)
PHIN	Heather Vole	3	2	5	2.5	3	4	7	9.5
CLGA	BOREAL REDBACK VOLE	4	6	10	5.0	4	6	10	15.0
MIPE	MEADOW Vole	1	2	3	1.5	1	2	3	4.5
MIMI	MOUNTAIN Vole	2	6	8	4.0	2	6	8	12.0
MILO	LONGTAIL VOLE	6	12	18	9.0	6	12	18	27.0
MIOR	OREGON VOLE	2	10	12	6.0	2	11	13	19.0
RANO	NORWAY RAT	2	2	4	2.0	2	2	4	6.0
MUMU	HOUSE MOUSE	3	3	6	3.0	3	3	6	9.0
URAM	BLACK BEAR	5	6	11	5.5	6	13	19	24.5
URAR	GRIZZLY BEAR	3	7	10	5.0	4	9	13	18.0
MUER	Short-tail Weasel	5	8	13	6.5	6	8	14	20.5
MUFR	Long-tail Weasel	6	7	13	6.5	6	7	13	19.5

Vulnerability Rating 3/ — High -12 to +3 | Medium (2) +3 to +18 | Low +18 to +33



1/ Reproductive orientation is weighted doubly to the feeding orientation; this is done by dividing the sum of columns 1 and 2 (= column 3) by 2. The results are shown in column 4.

2/ Vulnerability score is derived by adding columns 4 and 7.

3/ Species of special interest listed (rated) in Appendix 2.

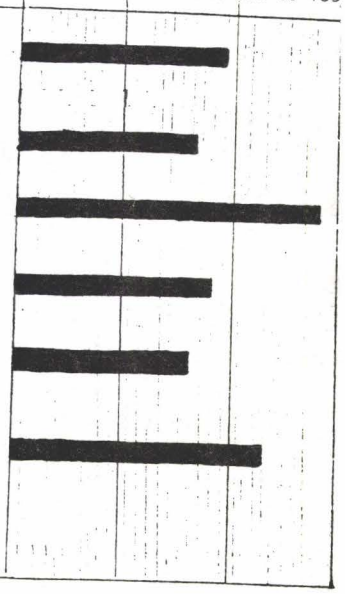
FIGURE 5. Vulnerability Ratings of Species

Life Form 15

Page 4 of 4

Letter Code	Species	Reproductive Orientation 1/ No. of Successional Stages Used (1)	No. of Plant Communities Used (2)	1 + 2 (3)	3/2 (4)	Feeding Orientation No. of Successional Stages Used (5)	No. of Plant Communities Used (6)	5 + 6 (7)	Vulnerability Score 2/ 4 + 7 (8)
TATA	Badger	4	7	11	5.5	4	7	11	16.5
MEMEP	Striped Skunk	2	7	9	4.5	2	7	9	13.5
CALAT	COYOTE	6	10	16	8.0	6	15	21	29.0
CALU	GRAY WOLF	3	4	7	3.5	6	6	12	15.5
VUVUF	COMMON RED FOX	5	3	8	4.0	6	3	9	13.0
VUVUC	CASCADE RED FOX	5	9	14	7.0	6	9	15	22.0

Vulnerability Rating 3/



1/ Reproductive orientation is weighted doubly to the feeding orientation; this is done by dividing the sum of columns 1 and 2 (= column 3) by 2. The results are shown in column 4.

2/ Vulnerability score is derived by adding columns 4 and 7.

3/ Species of special interest listed (rated) in Appendix 2.

Figure 1 — Relative Degree of Use by the Life Form to Indicated Plant Communities and Successional Stages

Life Form No. 16

Note: Only those species known to reproduce in Area 2 are shown on the various life form tables.

Total number in life form equals 10 species.

Reproduction Orientation ■

Feeding Orientation XXXXXX

PLANT COMMUNITY	DRY MEADOW	MOIST MEADOW	OTHER GRASS DOMINANT	SAGE-BITTER BRUSH DOMINANT	OTHER BRUSH & SHRUB DOMINANT	Douglas-Fir Dominant	Hemlock-Cedar	ASPEN	RIPARIAN-DECIDUOUS	PONDEROSA PINE	MIXED CONIFER	True FIR	LODGEPOLE PINE	SUB-ALPINE Species	ALPINE MEADOW	NUMBER OF SPECIES REPRODUCING & FEEDING
SUCCESSIONAL STAGES 1/	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	R F	
	3 0	3 6	3 0	4 1	7 4	4 3	4 3	3 3	10 7	3 2	4 3	4 3	2 2	3 3	2 2	
OLD (160 + years)						4 3	4 3	NATURAL ROTATION AGE		3 2	4 3	4 3	NATURAL ROTATION AGE	2 2	CLIMAX SUCCESSIONAL STAGES	
MATURE (80 - 159 years)						4 3	4 3	3 2	5 3	3 2	4 3	4 3		2 2		
YOUNG (40 - 79 years)			CLIMAX SUCCESSIONAL STAGES			3 2	3 2	3 2	4 2	3 2	3 2	3 2	2 2	1 1		
POLE - SAPLING (11 - 39 years)						3 2	3 2	3 2	4 2	3 2	3 2	3 2	2 2	1 1		
BRUSH - SEEDLING (0 - 10 years)				4 0	5 3	4 3	4 3	3 3	8 4	3 2	4 3	4 3	2 2	3 2		
GRASS - FORB	3 0	3 6	3 0	4 1	7 3	4 2	4 2	3 2	10 6	3 1	4 2	4 2	2 1	3 3	2 2	

NOTE: Low use of a certain successional stage of a plant community indicates low use of that stage by the life form as a whole. A particular species within the life form may be highly dependent on that one stage. For more detail see Figures 2 and 3.

The number above each bar indicates number of species using this successional stage within this plant community.

1/ FRED HALL

Figure 2. Species Orientation to Plant Communities

Life Form 16

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Dry Meadow	Moist Meadow	Other Grass Dominant	Sage-bitterbrush dominant	Other Brush & Shrub Dom	Douglas-Fir Dom.	Hemlock-Cedar	Aspen	Riparian Deciduous	Ponderosa Pine	Mixed Conifer	TRUE Fir	Lodgepole Pine	Subalpine Species	Alpine Meadow	Number of plant Communities USED: Reproduction	Feeding
MEAL	Belted Kingfisher	X		X		X				X							4	0
RIRI	Bank Swallow	X		X		X				X							4	0
STRU	Rough-winged Swallow	X	O	X		X				X							4	1
SOPA	Northern Water Shrew						XO	XO		XO		XO	XO		XO	XO	7	7
CACANA	Beaver				X	X O	XO	XO	XO	XO	XO	XO	XO	XO			10	9
MIRI	RICHARDSON'S VOLE		XO							XO					XO	XO	4	4
ONZI	Muskrat		XO		XO	X O				XO							4	4
MYCO	Nutria		XO							XO							2	2
MUVI	Mink		O		X	X O	XO	XO	XO	XO	XO	XO	XO	XO	XO		11	11
LUCA	River Otter		O		X	X O	X	X	XO	XO	X	X	X				9	4
Number of species using plant community	Reproduction	3	3	3	4	7	4	4	3	10	3	4	4	2	3	2		
	Feeding	0	6	0	1	4	3	3	3	7	2	3	3	2	3	2		

Figure 3. Species Orientation to Successional Stages

Life Form 16

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Grass-Forb	Brush-Seedling (0-10 yrs.)	Pole-Sapling (11-39 yrs.)	Young (40-79 yrs.)	Mature (80-159 yrs.)	Old (160+ years)	Number of Successional Stages USED: Reproduction	Feeding
MEAL	Belted Kingfisher	X	X	X	X	X		5	0
RIRI	Bank Swallow	X						1	0
STRU	Rough-winged Swallow	X O						1	1
SOPA	Northern Water Shrew	X O	X O			X O	X O	4	4
CACANA	Beaver	X	X O	X O	X O	X O	X O	6	5
MIRI	RICHARDSON'S VOLE	X O	X					2	1
ONZI	Muskrat	X O	X					2	1
MYCO	Nutria	X O	X					2	1
MUVI	Mink	X O	X O	X O	X O	X O	X O	6	6
LUCA	River Otter	X O	X O	X	X	X	X	6	2
Number of species using successional stage	Reproduction	10	8	4	4	5	4		
	Feeding	7	4	2	2	3	3		

Figure 4. Species Orientation to Unique and Special Habitat Components

Life Form 16

X = Reproduction O = Feeding

SPECIES CODE	COMMON NAME	Rivers	Streams	Sloughs	Lakes	Reservoirs (>2 ac.)	Ponds (<2 ac.)	Intermittent Ponds, Bogs	Marshes: Large	Marshes: Small	Marshes: Tule	Marshes: Sedge	Marshes: Deciduous	Cliff	Cave	Rims	Talus	SNAGS	DOWN MATERIAL	No. of unique and/or special habitat components USED: Reproducing	No. of unique and/or special habitat components USED: Feeding
MEAL	Belted Kingfisher	O	O	O																0	3
SOPA	Northern Water Shrew	O	O																	0	2
CACANA	Beaver	XO	XO	XO	XO	XO	O													5	6
MIRI	RICHARDSON'S VOLE		XO					XO				XO	XO							4	4
ONZI	Muskrat	O	O	O	O	O	O													0	6
MYCO	Nutria	O		O																0	2
MUVI	Mink	O	O	O	O	O														0	5
LUCA	River Otter	O	O	O	O	O														0	5
No. of species using unique-Special habitat components	Reproducing	1	2	1	1	1	0	1				1	1								
	Feeding	7	7	6	4	4	2	1				1	1								

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FIGURE 5. Vulnerability Ratings of Species

Life Form 16. (Reproduces in a burrow (underground) and feeds in the air or in the water.)

Note: Life forms 2, 3, 4 and 16 also depend on Unique Habitat components which are reflected below.

Letter Code	Species	Reproductive Orientation 1/ No. of Successional Stages Used (1)	Reproductive Orientation 1/ No. of Plant Communities Used (2)	Reproductive Orientation 1/ Columns 1+2 / 2 (3)	Feeding Orientation No. of Successional Stages Used (4)	Feeding Orientation No. of Plant Communities Used (5)	Feeding Orientation Columns 4 + 5 (6)	Feeding Orientation Columns 3 + 6 (7)	No. of Unique Components Subtracted from 13 (8) 4/	Vulnerability Score 2/ Columns 7-8 (9)	Vulnerability Rating 3/ High -12 to +3	Med. +3 to +18	Low +18 to +33
	Birds												
MEAL	Belted Kingfisher	5	4	4.5	-	-	-	4.5	(3) 10	-5.5			
RIRI	Bank Swallow	1	4	2.5	-	-	-	2.5	(0) 13	-10.5			
STRU	Rough-winged Swallow	1	4	2.5	1	1	2	4.5	(0) 13	-8.5			
	Mammals												
SOPA	Northern Water Shrew	4	7	5.5	4	7	11	16.5	(2) 11	+5.5			
CACANA	Beaver	6	10	8.0	5	9	14	22.0	(6) 7	+15.0			
MIRI	RICHARDSON'S VOLE	2	4	3.0	1	4	5	8.0	(4) 9	-1.0			
ONZI	Muskrat	2	4	3.0	1	4	5	8.0	(6) 7	+1.0			
MYCO	Nutria	2	2	2.0	1	2	3	5.0	(2) 11	-6.0			
MUVI	Mink	6	11	8.5	6	11	17	25.5	(5) 8	+17.5			
LUCA	River Otter	6	9	7.5	2	4	6	13.5	(5) 8	+5.5			

1/ Reproductive orientation is weighed doubly to the feeding orientation; this is done by dividing the sum of columns 1 and 2 by 2. The results are shown in column 3.

2/ Vulnerabillty score is derived by subtracting column 8 from column 7.

3/ Species of special interest shown (rated) in Appendix 2.

4/ This gives the inverted value of each number in range from one to twelve. (Twelve is the highest number of unique or special habitat components used by any single species.) Numbers in parenthesis is number of unique components used for feeding.

APPENDIX 1

ALPHABETICAL COMPUTER (LETTER) CODE LISTINGS
FOR ALL WILDLIFE SPECIES ON AREA 2 FORESTS

J = Jawless; F = Fish; A = Amphibian; R = Reptile; B = Bird; M = Mammal

Class	Code	Species Scientific Name	Species Common Name
F	ACAL	Acrocheilus alutaceus	Chiselmouth
B	ACCO	Accipiter cooperii	Cooper's Hawk
B	ACGE	Accipiter gentilis	Goshawk
B	ACMA	Actitis macularia	Spotted Sandpiper
B	ACST	Accipiter striatus	Sharp-shinned Hawk
F	ACTR	Acipenser transmontanus	White Sturgeon
B	AEAC	Aegolius acadicus	Saw-whet Owl
B	AEFU	Aegolius funereus	Boreal Owl
B	AEOC	Aechmophorus occidentalis	Western Grebe
B	AESA	Aeronautes saxatalis	White-throated Swift
B	AGPH	Agelaius phoeniceus	Red-winged Blackbird
B	AISP	Aix sponsa	Wood Duck
M	ALAL	Alces alces	American Moose
B	ALCH	Alectoris chukar	Chukar
B	AMBE	Amphispiza belli	Sage Sparrow
A	AMGR	Ambystoma gracile	Northwestern Salamander
A	AMMA	Ambystoma macrodactylum	Long-toed Salamander
B	AMSA	Ammodramus savannarum	Grasshopper Sparrow
A	AMTI	Ambystoma tigrinum	Tiger Salamander
B	ANAC	Anas acuta	Pintail
B	ANAL	Anser albifrons	White-fronted Goose
B	ANCL	Anas clypeata	Northern Shoveler
B	ANCR	Anas crecca	Green-winged Teal
B	ANCY	Anas cyanoptera	Cinnamon Teal

Class	Species Code	Species Scientific Name	Species Common Name
B	ANDI	Anas discors	Blue-winged Teal
M	ANPA	Antrozous pallidus	Pallid Bat
B	ANPL	Anas platyrhynchos	Mallard
B	ANRU	Anas rubripes	Black Duck
B	ANSP	Anthus spinoletta	Water Pipit
B	ANST	Anas strepera	Gadwall
M	APRU	Aplodontia rufa	Aplodontia
B	AQCH	Aquila chrysaetos	Golden Eagle
B	ARAL	Archilochus alexandri	Black-chinned Hummingbird
B	ARHE	Ardea herodias	Great Blue Heron
B	ARIN	Arenarius interpres	Ruddy Turnstone
B	ASFL	Asio flammeus	Short-eared Owl
B	ASOT	Asio otus	Long-eared Owl
A	ASTR	Ascaphus truei	Tailed Frog
B	ATCU	Athene cunicularia	Burrowing Owl
B	AYAF	Aythya affinis	Lesser Scaup
B	AYAM	Aythya americana	Redhead
B	AYCO	Aythya collaris	Ring-necked Duck
B	AYMA	Aythya marila	Greater Scaup
B	AYVA	Aythya valisineria	Canvasback
B	BAAM	Bartramia americana	Upland Sandpiper
B	BOCE	Bombycilla cedrorum	Cedar Waxwing
B	BOGA	Bombycilla garrulus	Bohemian Waxwing
B	BOLE	Botaurus lentiginosus	American Bittern
B	BOUM	Bonasa umbellus	Ruffed Grouse
B	BRCA	Branta canadensis	Canada Goose
B	BUAL	Bucephala albeola	Bufflehead

Class	Species Code	Species Scientific Name	Species Common Name
A	BUBO	Bufo boreas	Western Toad
B	BUCL	Bucephala clangula	Common Goldeneye
B	BUIS	Bucephala islandica	Barrow's Goldeneye
B	BUJA	Buteo jamaicensis	Red-tailed Hawk
B	BULA	Buteo lagopus	Rough-legged Hawk
B	BURE	Buteo regalis	Ferruginous Hawk
B	BUSW	Buteo swainsoni	Swainson's Hawk
B	BUVI	Bubo virginianus	Great Horned Owl
B	CAAL	Calidris alba	Sanderling
B	CAALB	Casmerodius albus	Great Egret
B	CAALP	Calidris alpina	Dunlin
B	CAAU	Cathartes aura	Turkey Vulture
B	CABA	Calidris bairdii	Baird's Sandpiper
B	CACA	Calidris canutes	Red Knot
B	CACAN	Canachites canadensis	Spruce Grouse
M	CACANA	Castor canadensis	Beaver
B	CACAS	Carpodacus cassinii	Cassin's Finch
F	CACAT	Catostomus catostomus	Longnose Sucker
F	CACO	Catostomus columbianus	Bridgelip Sucker
B	CAFE	Calidris ferruginea	Curlew Sandpiper
B	CAFL	Carduelis flammea	Common Redpoll
B	CAFU	Calidris fuscicollis	White-rumped Sandpiper
B	CAGA	Capella gallinago	Common Snipe
B	CAGU	Catharus guttatus	Hermit Thrush
B	CALA	Calcarius lapponicus	Lapland Longspur
M	CALAT	Canis latrans	Coyote
M	CALU	Canis lupus	Gray Wolf

Class	Species Code	Species Scientific Name	Species Common Name
B	CAMA	Calidris mauri	Western Sandpiper
F	CAMAC	Catostomus macrocheilus	Largescale Sucker
B	CAME	Calidris melanotos	Pectoral Sandpiper
B	CAMEX	Catherpes mexicanus	Canyon Wren
B	CAMEXI	Carpodacus mexicanus	House Finch
B	CAMI	Calidris minutilla	Least Sandpiper
B	CAPI	Carduelis pinus	Pine Siskin
F	CAPL	Catostomus platyrhynchus	Mountain Sucker
B	CAPU	Calidris pusilla	Semipalmated Sandpiper
B	CAPUR	Carpodacus purpureus	Purple Finch
B	CASE	Catoptrophorus semipalmatus	Willet
B	CATR	Carduelis tristis	American Goldfinch
B	CAUS	Catharus ustulatus	Swainson's Thrush
M	CECA	Cervus canadensis	Elk
B	CEFA	Certhia familiaris	Brown Creeper
B	CEUR	Centrocercus urophasianus	Sage Grouse
R	CHBO	Charina bottae	Rubber Boa
B	CHCA	Chen caerulescens	Snow Goose
B	CHGR	Chondestes grammacus	Lark Sparrow
B	CHMI	Chordeiles minor	Common Nighthawk
B	CHMO	Charadrius montanus	Mountain Plover
B	CHNI	Chlidonias niger	Black Tern
R	CHPI	Chrysemys picta	Painted Turtle
B	CHRO	Chen rossii	Ross' Goose
B	CHSE	Charadrius semipalmatus	Semipalmated Plover
B	CHVA	Chaetura vauxi	Vaux's Swift
B	CHVO	Charadrius vociferous	Killdeer

Class	Species Code	Species Scientific Name	Species Common Name
B	CICY	Circus cyaneus	Marsh Hawk
B	CIME	Cinclus mexicanus	Dipper
B	CIPA	Cistothorus palustris	Long-billed Marsh Wren
M	CLGA	Clethrionomys gapperi	Boreal Redback Vole
B	CLHY	Clangula hyemalis	Oldsquaw
F	COAS	Cottus asper	Prickly Sculpin
B	COAU	Colaptes auratus	Common Flicker
F	COBA	Cottus bairdi	Mottled Sculpin
F	COBE	Cottus beldingi	Piute Sculpin
B	COBR	Corvus brachyrhynchos	Common Crow
R	COCO	Coluber constrictor	Racer
F	COCOG	Cottus cognatus	Slimy Sculpin
F	COCON	Cottus confusus	Shorthead Sculpin
B	COCOR	Corvus corax	Common Raven
B	COFA	Columba fasciata	Band-tailed Pigeon
B	COLI	Columba livia	Rock Dove
F	CORH	Cottus rhotheus	Torrent Sculpin
B	COSO	Contopus sordidulus	Western Wood Pewee
B	COVI	Colinus virginianus	Bobwhite
R	CRVI	Crotalus viridis	Western Rattlesnake
F	CYCA	Cyprinus carpio	Common Carp
B	CYCR	Cyanocitta cristata	Blue Jay
B	CYNI	Cypseloides niger	Black Swift
B	CYST	Cyanocitta stelleri	Steller's Jay
B	DECO	Dendroica coronata	Yellow-rumped Warbler
B	DENI	Dendroica nigrescens	Black-throated Gray Warbler

Class	Species Code	Species Scientific Name	Species Common Name
B	DEOB	Dendragus obscurus	Blue Grouse
B	DEOC	Dendroica occidentalis	Hermit Warbler
B	DEPE	Dendroica petechia	Yellow Warbler
B	DETO	Dendroica townsendi	Townsend's Warbler
A	DIEN	Dicamptodon ensatus	Pacific Giant Salamander
R	DIPU	Diadophis punctatus	Western Ringneck Snake
M	DIVI	Didelphis virginiana	Virginia Opossum
B	DOOR	Dolichonyx oryzivorous	Bobolink
B	DRPI	Dryocopus pileatus	Pileated Woodpecker
B	DUCA	Dumetella carolinensis	Gray Catbird
B	EMDI	Empidonax difficilis	Western Flycatcher
B	EMHA	Empidonax hammondi	Hammond's Flycatcher
B	EMOB	Empidonax oberholseri	Dusky Flycatcher
B	EMTR	Empidonax traillii	Willow Flycatcher
B	EMWR	Empidonax wrightii	Gray Flycatcher
J	ENTR	Entosphenus tridentatus	Pacific Lamprey
M	EPFU	Eptesicus fuscus	Big Brown Bat
B	ERAL	Eremophila alpestris	Horned Lark
M	ERDO	Erethizon dorsatum	Porcupine
M	EUAM	Eutamias amoenus	Yellow Pine Chipmunk
B	EUCY	Euphagus cyanocephalus	Brewer's Blackbird
F	EUGI	Eupomotis gibbosus	Pumpkinseed
M	EUMI	Eutamias minimus	Least Chipmunk
M	EURU	Eutamias ruficaudus	Redtail Chipmunk
R	EUSK	Eumeces skiltonianus	Western Skink
M	EUTO	Eutamias townsendi	Townsend's Chipmunk

Class	Species Code	Species Scientific Name	Species Common Name
B	FACO	Falco columbarius	Merlin
B	FAME	Falco mexicanus	Prairie Falcon
B	FAPEA	Falco peregrinus anatum	American Peregrine Falcon
B	FAPET	Falco peregrinus tundrius	Arctic Peregrine Falcon
B	FARU	Falco rusticolus	Gyrfalcon
B	FASP	Falco sparverius	American Kestrel
M	FECA	Felis catus	Feral Housecat
M	FECO	Felis concolor	Mountain Lion
B	FUAM	Fulica americana	American Coot
F	GAAC	Gastorosteus aculeatus	Threespine Stickleback
B	GAAR	Gavia arctica	Arctic Loon
B	GAIM	Gavia immer	Common Loon
R	GECO	Gerrhonotus coeruleus	Northern Alligator Lizard
R	GEMU	Gerrhonotus multicarinatus	Foothill Alligator Lizard
B	GETR	Geothlypis trichas	Common Yellowthroat
F	GIBI	Gila bicolor	Tui Chub
B	GLGN	Glaucidium gnoma	Pygmy Owl
M	GLSA	Glaucomys sabrinus	Northern Flying Squirrel
B	GRCA	Grus canadensis	Sandhill Crane
M	GUGU	Gulo gulo	Wolverine
B	HALE	Haliaeetus leucocephalus	Bald Eagle
B	HEVE	Hesperiphona vespertina	Evening Grosbeak
B	HIHI	Histrionicus histrionicus	Harlequin Duck
B	HIME	Himantopus mexicanus	Black-necked Stilt
B	HIRU	Hirundo rustica	Barn Swallow
B	HYFU	Hylocichla fuscescens	Veery

Class	Species Code	Species Scientific Name	Species Common Name
A	HYRE	Hyla regilla	Pacific Treefrog
R	HYTO	Hysiglena torquata	Spotted Night Snake
B	ICGA	Icterus galbula	Northern Oriole
F	ICME	Ictalurus melas	Black Bullhead
B	ICVI	Icteria virens	Yellow-breasted Chat
B	IRBI	Iridoprocne bicolor	Tree Swallow
B	IXNA	Ixoreus naevius	Varied Thrush
B	JUHY	Junco hyemalis	Dark-eyed Junco
B	LAAR	Larus argentatus	Herring Gull
M	LABO	Lasiurus borealis	Red Bat
B	LACA	Larus californicus	California Gull
M	LACI	Lasiurus cinereus	Hoary Bat
B	LADE	Larus delawarensis	Ring-billed Gull
B	LAEX	Lanius excubitor	Northern Shrike
B	LAGL	Larus glaucescens	Glaucous-winged Gull
B	LAGLA	Larus glaucoides	Iceland Gull
B	LAHY	Larus hyperboreus	Glaucous Gull
B	LALE	Lagopus leucurus	White-tailed Ptarmigan
B	LALU	Lanius ludovicianus	Loggerhead Shrike
M	LANO	Lasionycteris noctivagans	Silver-haired Bat
B	LAPH	Larus philadelphia	Bonaparte's Gull
B	LAPI	Larus pipixcan	Franklin's Gull
J	LARI	Lampetra richardsoni	Western Brook Lamprey
M	LEAM	Lepus americanus	Snowshoe Hare
M	LECA	Lepus californicus	Blacktail Jackrabbit

Class	Species Code	Species Scientific Name	Species Common Name
F	LECY	Lepomis cyanellus	Green Sunfish
F	LEMA	Lepomis macrochirus	Bluegill
B	LETE	Leucosticte tephrocotis	Gray-crowned Rosy Finch
M	LETO	Lepus townsendi	Whitetail Jackrabbit
B	LIFE	Limosa fedoa	Marbled Godwit
B	LIGR	Limnodromus griseus	Short-billed Dowitcher
B	LISC	Limnodromus scolopaceus	Long-billed Dowitcher
B	LOCA	Lophortyx californicus	California Quail
B	LOCU	Lophodytes cucullatus	Hooded Merganser
B	LOCUR	Loxia curvirostra	Red Crossbill
B	LOLE	Loxia leucoptera	White-winged Crossbill
B	LOLO	Lobipes lobatus	Northern Phalarope
F	LOLOT	Lota lota	Burbot
M	LUCA	Lutra canadensis	River Otter
M	LYLY	Lynx lynx	Lynx
M	LYRU	Lynx rufus	Bobcat
B	MAAM	Mareca americana	American Wigeon
M	MAAME	Martes americana	Marten
M	MACA	Marmota caligata	Hoary Marmot
M	MAFL	Marmota flaviventris	Yellowbelly Marmot
B	MAPE	Mareca penelope	European Wigeon
M	MAPEN	Martes pennanti	Fisher
R	MATA	Masticophis taeniatus	Desert Striped Whipsnake
B	MEAL	Megaceryle alcyon	Belted Kingfisher
B	MEDE	Melanitta deglandi	White-winged Scoter
B	MEGA	Meleagris gallopavo	Turkey

Class	Species Code	Species Scientific Name	Species Common Name
B	MELE	Melanerpes lewis	Lewis' Woodpecker
B	MELI	Melospiza lincolnii	Lincoln's Sparrow
B	MEME	Melospiza melodia	Song Sparrow
M	MEMEP	Mephitis mephitis	Striped Skunk
B	MEMER	Mergus merganser	Common Merganser
B	MEPE	Melanitta perspicillata	Surf Scoter
B	MESE	Merganser serrator	Red-breasted merganser
F	MIDO	Micropterus dolomieui	Smallmouth Bass
B	MIHI	Micropalama himantopus	Stilt Sandpiper
M	MIHO	Microsorex hoyi	Pygmy Shrew
M	MILO	Microtus longicaudus	Longtail Vole
M	MIMO	Microtus montanus	Mountain Vole
M	MIOR	Microtus oregoni	Oregon Vole
M	MIPE	Microtus pennsylvanicus	Meadow Vole
M	MIRI	Microtus richardsoni	Richardson's Vole
F	MISA	Micropterus salmoides	Largemouth Bass
B	MNVA	Mniotilta varia	Black-and-white Warbler
B	MOAT	Molothrus ater	Brown-headed Cowbird
M	MUER	Mustela erminea	Shorttail Weasel
M	MUFR	Mustela frenata	Longtail Weasel
M	MUMU	Mus musculus	House Mouse
M	MUVI	Mustela vison	Mink
M	MYCA	Myotis californicus	California Myotis
F	MYCAU	Mylocheilus caurinus	Peamouth Chub
B	MYCI	Myiarchus cinerascens	Ash-throated Flycatcher
M	MYCO	Myocastor coypus	Nutria
M	MYEV	Myotis evotis	Long-eared Myotis
M	MYKE	Myotis keeni	Keen's Myotis

Class	Species Code	Species Scientific Name	Species Common Name
M	MYLE	Myotis leibi	Small-footed Myotis
M	MYLU	Myotis luci fugus	Little Brown Bat
B	MYTO	Myadestes townsendi	Townsend's Solitaire
M	MYVO	Myotis volans	Long-legged Myotis
M	MYYU	Myotis yumanensis	Yuma Myotis
M	NECI	Neotoma cinerea	Bushytail Woodrat
M	NEGI	Neurotrichus gibbsi	Shrew-mole
B	NUAM	Numenius americanus	Long-billed Curlew
B	NUBO	Nuttallornis borealis	Olive-sided Flycatcher
B	NUCO	Nucifraga columbiana	Clark's Nutcracker
B	NUPH	Numenius phaeopus	Whimbrel
B	NYNY	Nycticorax nycticorax	Black-crowned Night Heron
B	NYSC	Nyctea scandiaca	Snowy Owl
M	OCPR	Ochotona princeps	Pika
M	ODHEC	Odocoileus hemionus columbianus	Columbia Blacktail Deer
M	ODHEH	Odocoileus hemionus hemionus	Mule Deer
M	ODVI	Odocoileus virginianus	Northwestern Whitetail Deer
B	OLBU	Olor buccinator	Trumpeter Swan
B	OLCO	Olor columbianus	Whistling Swan
F	ONKI	Oncorhynchus kisutch	Coho Salmon
M	ONLE	Onychomys leucogaster	Grasshopper Mouse
F	ONNE	Oncorhynchus nerka	Sockeye Salmon
F	ONNEK	Oncorhynchus nerka kennerlyi	Kokanee
F	ONTS	Oncorhynchus tshawytscha	Chinook Salmon
M	ONZI	Ondatra zibethica	Muskrat
B	OPTO	Oporornis tolmiei	MacGillivray's Warbler

Class	Species Code	Species Scientific Name	Species Common Name
M	ORAM	Oreamnos americanus	Mountain Goat
B	ORMO	Oreoscoptes montanus	Sage Thrasher
B	ORPI	Oreortyx pictus	Mountain Quail
B	OTAS	Otus asio	Screech Owl
B	OTFL	Otus flammeolus	Flammulated Owl
M	OVCA	Ovis canadensis	Bighorn Sheep
B	OXJA	Oxyura jamaicensis	Ruddy Duck
B	PAAM	Passerina amoena	Lazuli Bunting
B	PAAT	Parus atricapillus	Black-capped Chickadee
B	PADO	Passer domesticus	House Sparrow
B	PAGA	Parus gambeli	Mountain Chickadee
B	PAHA	Pandion haliaetus	Osprey
B	PAHU	Parus hudsonicus	Boreal Chickadee
B	PAIL	Passerella iliaca	Fox Sparrow
B	PARU	Parus rufescens	Chestnut-backed Chickadee
B	PASA	Passerculus sandwichensis	Savannah Sparrow
B	PECA	Perisoreus canadensis	Gray Jay
B	PEER	Pelecanus erythrorhynchos	White Pelican
F	PEFL	Perca flavescens	Yellow Perch
M	PEMA	Peromyscus maniculatus	Deer Mouse
M	PEPA	Perognathus parvus	Great Basin Pocket Mouse
B	PEPE	Perdix perdix	Gray Partridge
B	PEPH	Pedioecetes phasianellus	Sharp-tailed Grouse
B	PEPY	Petrochelidon pyrrhonota	Cliff Swallow
B	PHAU	Phalacrocorax auritus	Double-crested Cormorant
B	PHCO	Phasianus colchicus	Ring-necked Pheasant
R	PHDO	Phrynosoma douglassi	Short-horned Lizard

Class	Species Code	Species Scientific Name	Species Common Name
M	PHIN	Phenacomys intermedius	Heather Vole
B	PHME	Pheucticus melanocephalus	Black-headed Grosbeak
B	PHNU	Phalaenoptilus nuttallii	Poor-will
B	PIAL	Picoides albolarvatus	White-headed Woodpecker
B	PIAR	Picoides arcticus	Black-backed Three-toed Woodpecker
B	PIEN	Pinicola enucleator	Pine Grosbeak
B	PIER	Pipilo erythrophthalmus	Rufous-sided Towhee
M	PIHE	Pipistrellus hesperus	Western Pipistrelle
B	PILU	Piranga ludoviciana	Western Tanager
R	PIME	Pituophis melanoleucus	Gopher Snake
B	PIPI	Pica pica	Black-billed Magpie
B	PIPU	Picoides pubescens	Downy Woodpecker
B	PITR	Picoides tridactylus	Northern Three-toed Woodpecker
B	PIVI	Picoides villosus	Hairy Woodpecker
B	PLDO	Pluvialis dominica	American Golden Plover
B	PLNI	Plectrophenax nivalis	Snow Bunting
B	PLSQ	Pluvialis squatarola	Black-bellied Plover
M	PLTO	Plecotus townsendi	Townsend's Big-eared Bat
A	PLVE	Plethodon vehiculum	Western Red-backed Salamander
B	POAU	Podiceps auritus	Horned Grebe
B	POCA	Porzana carolina	Sora
B	POGR	Podiceps grisegena	Red-necked Grebe
B	POGRA	Pooecetes gramineus	Vesper Sparrow
B	PONI	Podiceps nigricollis	Eared Grebe
B	POPO	Podilymbus podiceps	Pied-billed Grebe
M	PRLO	Procyon lotor	Racoon
B	PRSU	Progne subis	Purple Marten
F	PRWI	Prosopium williamsoni	Mountain Whitefish

Class	Species Code	Species Scientific Name	Species Common Name
B	PSMI	Psaltriparus minimus	Bushtit
F	PTOR	Ptychocheilus oregonensis	Northern Squawfish
A	RACA	Rana cascadae	Cascade Frog
A	RACAT	Rana catesbeiana	Bullfrog
B	RALI	Rallus limicola	Virginia Rail
M	RANO	Rattus norvegicus	Norway Rat
A	RAPI	Rana pipiens	Leopard Frog
A	RAPR	Rana pretiosa	Spotted Frog
M	RATA	Rangifer tarandus	Mountain Caribou
B	REAM	Recurvirostra americana	American Avocet
B	RECA	Regulus calendula	Ruby-crowned Kinglet
M	REME	Reithrodontomys megalotis	Western Harvest Mouse
B	RESA	Regulus satrapa	Golden-crowned Kinglet
F	RHCA	Rhinichthys cataractae	Longnose Dace
F	RHFA	Rhinichthys falcatus	Leopard Dace
F	RHOS	Rhinichthys osculus	Speckled Dace
F	RIBA	Richardsonius balteatus	Redside Shiner
B	RIRI	Riparia riparia	Bank Swallow
F	SAAQ	Salmo aqua-bonita	Golden Trout
F	SACL	Salmo clarki	Cutthroat Trout
F	SAFO	Salvelinus fontinalis	Brook Trout
F	SAGA	Salmo gairdneri	Rainbow Trout
F	SAGAG	Salmo gairdneri gairdneri	Steelhead
F	SAMA	Salvelinus malma	Dolly Varden
F	SANA	Salvelinus namaycush	Lake Trout
B	SAOB	Salpinctes obsoletus	Rock Wren

Class	Species Code	Species Scientific Name	Species Common Name
B	SASA	Sayornis saya	Say's Phoebe
F	SASAL	Salmo salar	Atlantic Salmon
F	SATR	Salmo trutta	Brown Trout
R	SCGR	Sceloporus graciosus	Sagebrush Lizard
M	SCGRI	Sciurus griseus	Western Gray Squirrel
A	SCIN	Scaphiopus intermontanus	Great Basin Spadefoot Toad
R	SCOC	Sceloporus occidentalis	Western Fence Lizard
M	SCOR	Scapanus orarius	Coast Mole
B	SENO	Seiurus noveboracensis	Northern Waterthrush
B	SERU	Selasphorus rufus	Rufous Hummingbird
B	SERUT	Setophaga ruticilla	American Redstart
B	SICA	Sitta carolinensis	White-breasted Nuthatch
B	SICAN	Sitta canadensis	Red-breasted Nuthatch
B	SICU	Sialia currucoides	Mountain Bluebird
B	SIME	Sialia mexicana	Western Bluebird
B	SIPY	Sitta pygmaea	Pygmy Nuthatch
M	SOCI	Sorex cinereus	Masked Shrew
M	SOOB	Sorex obscurus	Dusky Shrew
M	SOPA	Sorex palustris	Northern Water Shrew
M	SOTR	Sorex trowbridgei	Trowbridge's Shrew
M	SOVA	Sorex vagrans	Vagrant Shrew
B	SPAR	Spizella arborea	Tree Sparrow
M	SPBE	Spermophilus beecheyi	California Ground Squirrel
B	SPBR	Spizella breweri	Brewer's Sparrow
M	SPCO	Spermophilus columbianus	Columbian Ground Squirrel
M	SPLA	Spermophilus lateralis	Golden-mantled Ground Squirrel
B	SPPA	Spizella passerina	Chipping Sparrow
M	SPSA	Spermophilus sateratus	Cascade Golden-mantled Ground Squirrel

Class	Species Code	Species Scientific Name	Species Common Name
B	SPTH	Sphyrapicus thyroideus	Williamson's Sapsucker
M	SPTO	Spermophilus townsendi	Townsend's Ground Squirrel
B	SPVA	Sphyrapicus varius	Yellow-bellied Sapsucker
B	STCA	Stellula calliope	Calliope Hummingbird
B	STCAS	Sterna caspia	Caspian Tern
B	STFO	Sterna forsteri	Forster's Tern
B	STLO	Stercorarius longicaudus	Long-tailed Jaeger
B	STNE	Strix nebulosa	Great Gray Owl
B	STNEG	Sturnella neglecta	Western Meadowlark
B	STOC	Strix occidentalis	Spotted Owl
B	STRU	Stelgidopteryx ruficollis	Rough-winged Swallow
B	STTR	Steganopus tricolor	Wilson's Phalarope
B	STVA	Strix varia	Barred Owl
F	STVI	Stizostedion vitreum	Walleye
B	STVU	Sturnus vulgaris	Starling
B	SUUL	Surnia ulula	Hawk Owl
M	SYBO	Synaptomys borealis	Northern Bog Lemming
M	SYFL	Sylvilagus floridanus	Eastern Cottontail
M	SYNU	Sylvilagus nuttalli	Nuttall's Cottontail
M	TADO	Tamiasciurus douglasi	Chickaree (Douglas Squirrel)
A	TAGR	Taricha granulosa	Rough-skinned Newt
M	TAHU	Tamiasciurus hudsonicus	Red Squirrel
M	TAMA	Tadarida macrotis	Big Freetail Bat
M	TATA	Taxidea taxus	Badger
B	TATH	Tachycineta thalassina	Violet-green Swallow
B	THBE	Thryomanes bewickii	Bewick's Wren
R	THEL	Thamnophis elegans	Western Garter Snake

Class	Species Code	Species Scientific Name	Species Common Name
R	THOR	Thamnophis ordinoides	Northwestern Garter Snake
R	THSI	Thamnophis sirtalis	Common Garter Snake
M	THTA	Thomomys talpoides	Northern Pocket Gopher
F	TITI	Tinca tinca	Tench
B	TRAE	Troglodytes aedon	House Wren
B	TRFL	Tringa flavipes	Lesser Yellowlegs
B	TRME	Tringa melanoleuca	Greater Yellowlegs
B	TRSO	Tringa solitaria	Solitary Sandpiper
B	TRSU	Tryngites subruficollis	Buff-breasted Sandpiper
B	TRTR	Troglodytes troglodytes	Winter Wren
B	TUMI	Turdus migratorius	American Robin
B	TYAL	Tyto alba	Barn Owl
B	TYTY	Tyrannus tyrannus	Eastern Kingbird
B	TYVE	Tyrannus verticalis	Western Kingbird
M	URAM	Ursus americanus	Black Bear
M	URAR	Ursus arctos	Grizzly Bear
R	UTST	Uta stansburiana	Side-blotched Lizard
B	VECE	Vermivora celata	Orange-crowned Warbler
B	VERU	Vermivora ruficapilla	Nashville Warbler
B	VIGI	Vireo gilvus	Warbling Vireo
B	VIOL	Vireo olivaceus	Red-eyed Vireo
B	VISO	Vireo solitarius	Solitary Vireo
M	VUVUC	Vulpes vulpes cascadensis	Cascade Red Fox
M	VUVUF	Vulpes vulpes fulva	Common Red Fox
B	WIPU	Wilsonia pusilla	Wilson's Warbler

Class	Species Code	Species Scientific Name	Species Common Name
B	XAXA	Xanthocephalus xanthocephalus	Yellow-headed Blackbird
M	ZAPR	Zapus princeps	Western Jumping Mouse
M	ZATR	Zapus trinotatus	Pacific Jumping Mouse
B	ZEMA	Zenaida macroura	Mourning Dove
B	ZOAL	Zonotrichia albicollis	White-throated Sparrow
B	ZOAT	Zonotrichia atricapilla	Golden-crowned Sparrow
B	ZOLE	Zonotrichia leucophrys	White-crowned Sparrow
B	ZOQU	Zonotrichia querula	Harris' Sparrow

APPENDIX 2

WILDLIFE SPECIES OF AREA 2 - STATUS CLASSIFICATION SYSTEMS

This listing indicates the different classifications assigned certain wildlife species by various publications. The only two which are considered official are the Federal Register (1/) and the Washington State list (15/). Capital letter designations indicate the status assigned to the species by the particular publication.

L E G E N D

X - Occurs on the List
E - Endangered E/
T - Threatened
R - Rare
SU - Status Undetermined
SI - Species of Special Interest
P - Peripheral
U - Unique D/

FOOTNOTES FOR SYMBOLS:

A/ Alaskan subspecies that may occur in Area 2.

B/ Subspecies that occur in Area 2.

C/ The Yukon Fox Sparrow may occur in Area 2 during winter months.

D/ The USDA FS RNA "Yellow Book" or reference 5 uses the letter U to mean Uncommon.

E/ This E for Gray Wolf means extinct, as used in the "Yellow Book".

REFERENCES:

1/ Federal Register, September 26, 1975, Endangered and Threatened Wildlife and Plants.

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4/ Arbib, Robert, 1975. The Blue List of 1976. American Birds 29(6): 1067-1072.

5/ Dryness, C. T., Jerry F. Franklin, Chris Maser, Stanton A. Cook, James D. Hall, and Glenda Faxon, 1975. Research natural area needs in the Pacific Northwest. USDA Forest Service General Technical Report PNW-38. 231 p. Portland. (Yellow Book).

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7/ 1975 Washington Environmental Atlas. Seattle District, U.S. Army Corps of Engineers and the Institute of Environmental Studies, University of Washington; 115 pages.

8/ Larrison, Earl J., 1970. Washington Mammals. The Seattle Audubon Society; 243 pages.

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10/ Ossa, Helen. 1973. They Saved Our Birds. Hippocrene Books, Inc., New York; 287 pages.

11/ 1974. Proceedings of the Symposium on Endangered and Threatened Species of North America; Washington, D.C. Authors and Species, as listed.

12/ Colville Forest List, 1976.

13/ Okanogan Forest List, 1976.

14/ Wenatchee Forest List, 1976.

15/ Pers. Comm. w/E. Reade Brown, February, 1977: Washington State has no established list of threatened and/or endangered species.

Species Code	Life Form Number	Species	Federal Register (Endangered) 1/	USDI F&WS "Red Book" 2/	US FS R-6 Endangered Threatened & Unique Fish and Wildlife 3/	Audubon - Blue List for 1976 4/	USDA FS RNA "Yellow Book" 5/	Rare Mammals of Washington 6/	1975 Washington Environmental Atlas 7/	Earl Larrison 8/	George Laycock 9/	Helen Ossa 10/	John Craighead Gordon Haber Jeff Miller Roger Tory Peterson 11/	Colville Forest 12/	Okanogan Forest 13/	Wenatchee Forest 14/	Washington State List (to be Published) 15/
THSIG	1	Arctic Greyling		T							E						
PLVE	14	Western Red-Backed Salamander											U				
ASTR	2	Tailed Frog			U		SI									U	
RAPR	2	Spotted Frog			U		SI									U	
EUSK	3	Western Skink						R									
GEMU	5	Foothill Alligator Lizard					SI										
GECO	5	Northern Alligator Lizard												U			
CHBO	15	Rubber Boa														U	
DIPU	3	Western Ringneck Snake					SI		R							U	
MATA	5	Desert Striped Whipsnake					SI		R								
HYTO	5	Spotted Night Snake					SI		R								

Species Code	Life Form Number	Species	Federal Register (Endangered) 1/	USDI F&WS "Red Book" 2/	US FS R-6 Endangered Threatened & Unique Fish and Wildlife 3/	Audubon - Blue List for 1976 4/	USDA FS RNA "Yellow Book" 5/	Rare Mammals of Washington 6/	1975 Washington Environmental Atlas 7/	Earl Larrison 8/	George Laycock 9/	Helen Ossa 10/	John Craighead Gordon Haber Jeff Miller Roger Tory Peterson 11/	Colville Forest 12/	Okanogan Forest 13/	Wenatchee Forest 14/	Washington State List (to be Published) 15/
GAIM	3	Common Loon													U		
POGR	3	Red-Necked Grebe			X	SI											
POAU	3	Horned Grebe				SI											
AEOC	3	Western Grebe			X												
PEER	3	White Pelican			X	SI								U			
PHAU	3	Double-Crested Cormorant			X												
ARHE	12	Great Blue Heron												U	U	U	
CAALB	7	Great Egret				SI											
NYNY	7	Black-Crowned Night Heron			X												
BOLE	3	American Bittern			X	SI											

Species Code	Life Form Number	Species	Federal Register (Endangered) 1/	USDI F&WS "Red Book" 2/	US FS R-6 Endangered Threatened & Unique Fish and Wildlife 3/	Audubon - Blue List for 1976 4/	USDA FS RNA "Yellow Book" 5/	Rare Mammals of Washington 6/	1975 Washington Environmental Atlas 7/	Earl Larrison 8/	George Laycock 9/	Helen Ossa 10/	John Craighead Gordon Haber Jeff Miller Roger Tory Peterson 11/	Colville Forest 12/	Okanogan Forest 13/	Wenatchee Forest 14/	Washington State List (to be Published) 15/
OLBU	3	Trumpeter Swan		E			SI				E					U	
BRCAL	3	Aleutian Canada Goose	E	E			SI				E						
ANRU	3	Black Duck					SI										
MAPE	3	European [illegible]					SI		R								
AYVA	3	Canvasback				X							T				
HIHI	3	Harlequin Duck			U				R							U	
MEDE	3	White-Winged Scoter					SI		R								
LOCU	14	Hooded Merganser												U	U	U	
CAAU	4	Turkey Vulture					SI							U	U	U	
ACGE	11	Goshawk												U	U	U	

Species Code	Life Form Number	Species	Federal Register (Endangered) 1/	USDI F&WS "Red Book" 2/	US FS R-6 Endangered Threatened & Unique Fish and Wildlife 3/	Audubon - Blue List for 1976 4/	USDA FS RNA "Yellow Book" 5/	Rare Mammals of Washington 6/	1975 Washington Environmental Atlas 7/	Earl Larrison 8/	George Laycock 9/	Helen Ossa 10/	John Craighead Gordon Haber Jeff Miller Roger Tory Peterson 11/	Colville Forest 12/	Okanogan Forest 13/	Wenatchee Forest 14/	Washington State List (to be Published) 15/
ACST	11	Sharp-Shinned Hawk				X											
ACCO	11	Cooper's Hawk				X											
BUJA	12	Red-Tailed Hawk					SI[4]										
BUSW	7	Swainson's Hawk				X											
BULA	5	Rough-Legged Hawk					SI										
BURE	4	Ferruginous Hawk			SU		X	SI									
AQCH	12	Golden Eagle				X	SI					T		U	U	U	
HALE	12	Bald Eagle	T		U		SI					T	E	U	T	T	
CICY	5	Marsh Hawk				X											
PAHA	12	Osprey			SU	U	X	SI				T		T	U	U	

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FARU 4	Gyrfalcon						SI		R							U	
FAME 4	Prairie Falcon			T	T	X	SI		R							U	
FAPEA 4	American Peregrine Falcon	E	T	E			SI		R		E	E	E	E	E	E	
FAPET 4	Arctic Peregrine Falcon	E	T	E					R		E	E	E	E	E	E	
FACO 11	Merlin						X	SI					E	U	U	U	
FASP 14	American Kestrel						X	SI									
CACAN 5	Spruce Grouse			U				SI						U	U	U	
LALE 4	White-Tailed Ptarmigan	P													U	U	
PEPH 5	Sharp-Tailed Grouse	SU						SI									
CEUR 5	Sage Grouse						X	SI									

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Species Code	Life Form Number	Species	Federal Register (Endangered) 1/	USDI F&WS "Red Book" 2/	US FS R-6 Endangered Threatened & Unique Fish and Wildlife 3/	Audubon - Blue List for 1976 4/	USDA FS RNA "Yellow Book" 5/	Rare Mammals of Washington 6/	1975 Washington Environmental Atlas 7/	Earl Larrison 8/	George Laycock 9/	Helen Ossa 10/	John Craighead Gordon Haber Jeff Miller Roger Tory Peterson 11/	Colville Forest 12/	Okanogan Forest 13/	Wenatchee Forest 14/	Washington State List (to be Published) 15/
ORPI	5	Mountain Quail				X											
MEGA	5	Turkey						R						U			
GRCA	3	Sandhill Crane			U		SI										
RALI	3	Virginia Rail					SI										
CHMO	3	Mountain Plover					SI										
NUAM	3	Long-Billed Curlew					SI							U	U		
BAAM	5	Upland Sandpiper				X	SI										
TRSO	7	Solitary Sandpiper					SI										
CACA	3	Red Knot					SI										
CAFU	3	White-Rumped Sandpiper					SI										

Species Code	Life Form Number	Species	Federal Register (Endangered) 1/	USDI F&WS "Red Book" 2/	US FS R-6 Endangered Threatened & Unique Fish and Wildlife 3/	Audubon - Blue List for 1976 4/	USDA FS RNA "Yellow Book" 5/	Rare Mammals of Washington 6/	1975 Washington Environmental Atlas 7/	Earl Larrison 8/	George Laycock 9/	Helen Ossa 10/	John Craighead Gordon Haber Jeff Miller Roger Tory Peterson 11/	Colville Forest 12/	Okanogan Forest 13/	Wenatchee Forest 14/	Washington State List (to be Published) 15/
STNE	12	Great Gray Owl			U		SI		SU						U	U	
ASFL	5	Short-Eared Owl				X											
AEFU	14	Boreal Owl					SI		SU								
PHNU	6	Poor-Will					SI										
CHMI	6	Common Nighthawk				X											
CYNI	4	Black Swift													U		
DRPI	13	Pileated Woodpecker													U	U	
MELE	13	Lewis' Woodpecker				X									U		
PIVI	13	Hairy Woodpecker				X											
PIAL	13	White-Headed Woodpecker							R						U		

Species Code	Life Form Number	Species	Federal Register (Endangered) 1/	USDI F&WS "Red Book" 2/	US FS R-6 Endangered Threatened & Unique Fish and Wildlife 3/	Audubon - Blue List for 1976 4/	USDA FS RNA "Yellow Book" 5/	Rare Mammals of Washington 6/	1975 Washington Environmental Atlas 7/	Earl Larrison 8/	George Laycock 9/	Helen Ossa 10/	John Craighead Gordon Haber Jeff Miller Roger Tory Peterson 11/	Colville Forest 12/	Okanogan Forest 13/	Wenatchee Forest 14/	Washington State List (to be Published) 15/
PIAR	13	Black-Backed Three-Toed Woodpecker							R						U		
PITR	13	Northern Three-Toed Woodpecker			U		SI		R						U		
MYCI	14	Ash-Throated Flycatcher							R								
PEPY	4	Cliff Swallow				X											
PRSU	14	Purple Martin													U		
CYCR	9	Blue Jay							R								
PAHU	14	Boreal Chickadee		P			SI		R						U		
PARU	14	Chestnut-Backed Chickadee					SI										
PSMI	8	Bushtit					SI										
SICAN	13	Red-Breasted Nuthatch					SI										
CIME	3	Dipper														U	

Species Code	Life Form Number	Species	Federal Register (Endangered) 1/	USDI F&WS "Red Book" 2/	US FS R-6 Endangered Threatened & Unique Fish and Wildlife 3/	Audubon - Blue List for 1976 4/	USDA FS RNA "Yellow Book" 5/	Rare Mammals of Washington 6/	1975 Washington Environmental Atlas 7/	Earl Larrison 8/	George Laycock 9/	Helen Ossa 10/	John Craighead Gordon Haber Jeff Miller Roger Tory Peterson 11/	Colville Forest 12/	Okanogan Forest 13/	Wenatchee Forest 14/	Washington State List (to be Published) 15/
DUCA	7	Gray Catbird					SI							U	U	U	
CAGU	5	Hermit Thrush												U	U	U	
HYFU	5	Veery					SI										
SIME	14	Western Bluebird					SI							U			
SICU	14	Mountain Bluebird				X								U	U	U	
ANSP	5	Water Pipit					SI							U	U	U	
BOGA	8	Bohemian Waxwing					SI										
LALU	7	Loggerhead Shrike				X											
VISO	11	Solitary Vireo					SI										
VIOL	11	Red-Eyed Vireo					SI										
VIGI	11	Warbling Vireo					SI										

Species Code	Life Form Number	Species	Federal Register (Endangered) 1/	USDI F&WS "Red Book" 2/	US FS R-6 Endangered Threatened & Unique Fish and Wildlife 3/	Audubon - Blue List for 1976 4/	USDA FS RNA "Yellow Book" 5/	Rare Mammals of Washington 6/	1975 Washington Environmental Atlas 7/	Earl Larrison 8/	George Laycock 9/	Helen Ossa 10/	John Craighead Gordon Haber Jeff Miller Roger Tory Peterson 11/	Colville Forest 12/	Okanogan Forest 13/	Wenatchee Forest 14/	Washington State List (to be Published) 15/
MNVA	6	Black-and-White Warbler					SI		R								
VECE	6	Orange-Crowned Warbler					SI										
DEPE	8	Yellow Warbler				X											
DECO	10	Yellow-Rumped Warbler					SI										
DENI	7	Black-Throated Gray Warbler					SI										
SENO	3	Northern Waterthrush					SI		R								
OPTO	7	Macgillivray's Warbler					SI										
GETR	3	Common Yellowthroat					SI										
ICVI	8	Yellow-Breasted Chat				X											
SERUT	9	American Redstart					SI		U								

Species Code	Life Form Number	Species	Federal Register (Endangered) 1/	USDI F&WS "Red Book" 2/	US FS R-6 Endangered Threatened & Unique Fish and Wildlife 3/	Audubon - Blue List for 1976 4/	USDA FS RNA "Yellow Book" 5/	Rare Mammals of Washington 6/	1975 Washington Environmental Atlas 7/	Earl Larrison 8/	George Laycock 9/	Helen Ossa 10/	John Craighead Gordon Haber Jeff Miller Roger Tory Peterson 11/	Colville Forest 12/	Okanogan Forest 13/	Wenatchee Forest 14/	Washington State List (to be Published) 15/
DOOR	5	Bobolink							R					U			
STNEG	5	Western Meadowlark					SI										
PAAM	7	Lazuli Bunting					SI										
PIEN	11	Pine Grosbeak					SI										
LETE	4	Gray-Crowned Rosy Finch													U	U	
LOLE	10	White-Winged Crossbill							R					U	U	U	
AMSA	5	Grasshopper Sparrow				X	SI										
POGRA	5	Vesper Sparrow					SI										
JUHY	5	Dark-Eyed Junco					SI	B/									
SPAR	7	Tree Sparrow					SI										

Species Code	Life Form Number	Species	Federal Register (Endangered) 1/	USDI F&WS "Red Book" 2/	US FS R-6 Endangered Threatened & Unique Fish and Wildlife 3/	Audubon - Blue List for 1976 4/	USDA FS RNA "Yellow Book" 5/	Rare Mammals of Washington 6/	1975 Washington Environmental Atlas 7/	Earl Larrison 8/	George Laycock 9/	Helen Ossa 10/	John Craighead Gordon Haber Jeff Miller Roger Tory Peterson 11/	Colville Forest 12/	Okanogan Forest 13/	Wenatchee Forest 14/	Washington State List (to be Published) 15/
ZOQU	5	Harris' Sparrow					SI	R									
ZOAL	5	White-Throated Sparrow						R									
PAIL	7	Fox Sparrow					SI[1]										
DIVI	5	Virginia Opossum					U[2]	SU									
SOCI	15	Masked Shrew					U										
MIHO	15	Pygmy Shrew					R										U
MYLU	14	Little Brown Bat															U
MYKE	4	Keen's Myotis					R	R									U
MYEV	14	Long-Eared Myotis					U										U
MYVO	14	Long-Legged Myotis					R	R									U

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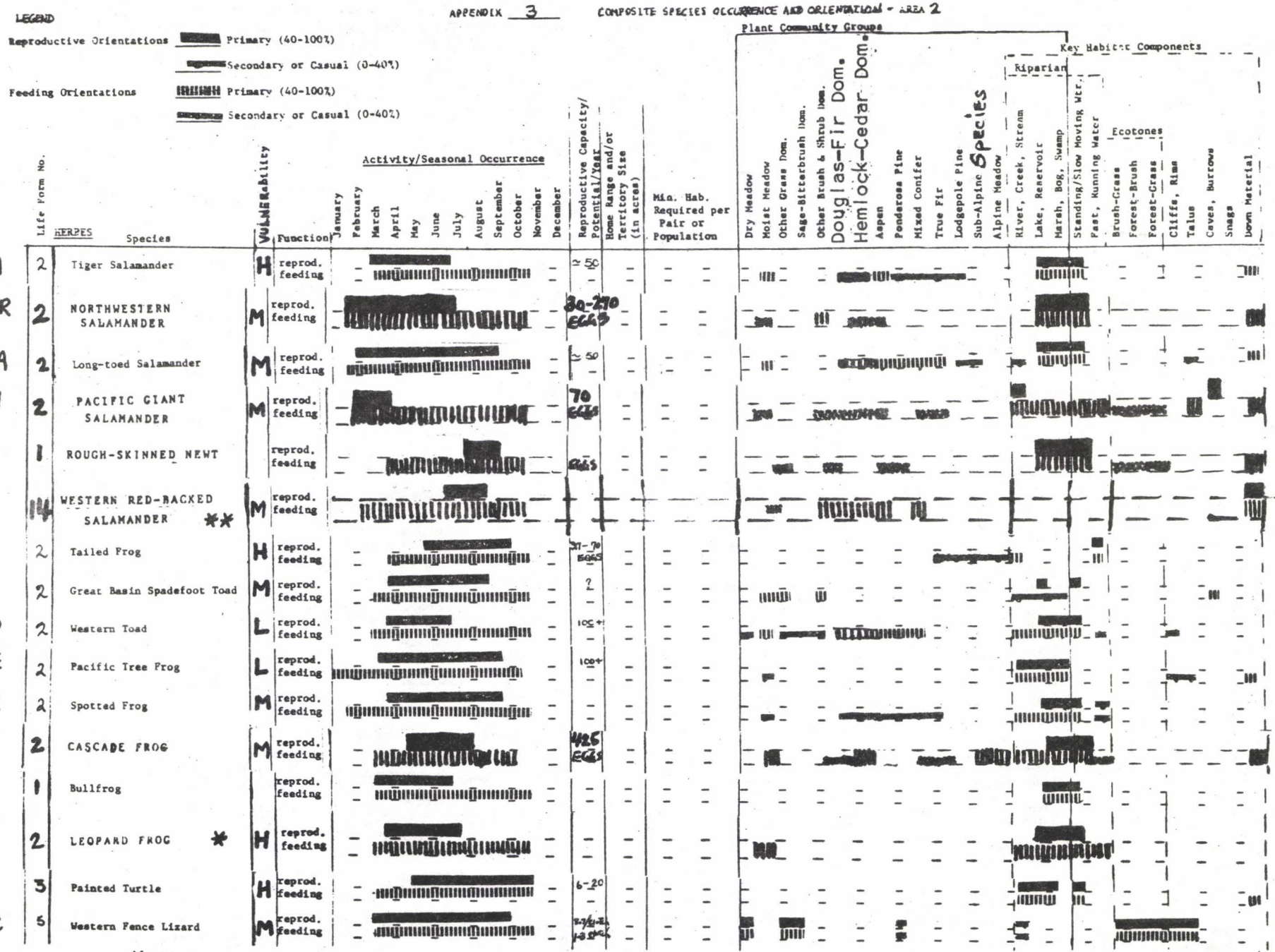
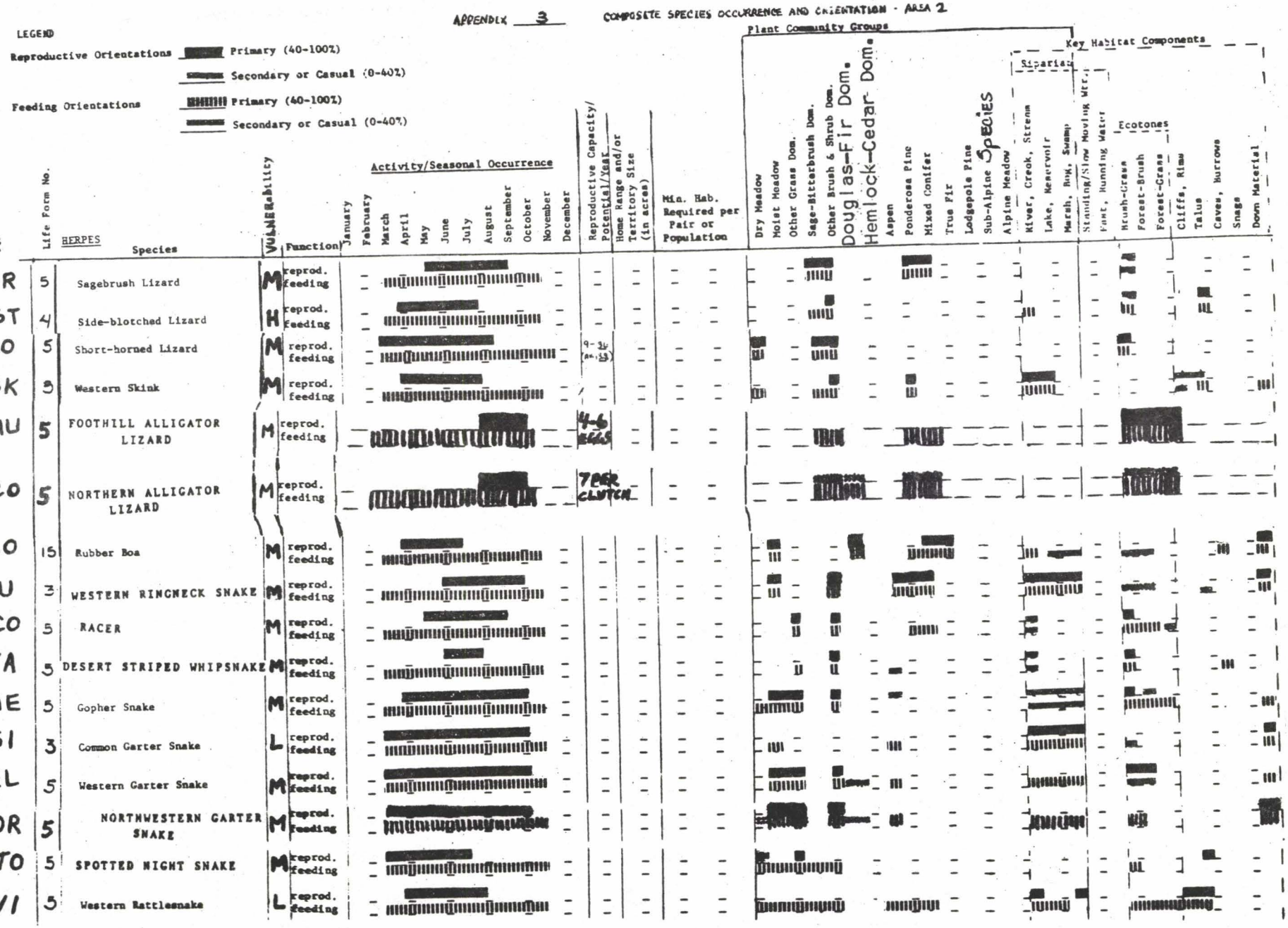
LUCA	16	River Otter													U	U	
GUGU	5	Wolverine		SU	U		T	X	R					U	U	U	
TATA	15	Badger														U	
CALU	15	Gray Wolf	E	T			E[EJ]	X	R	E	E	T	U				
VUVUC	15	Cascade Re					R	X					U	U			
FECO	4	Mountain Lion			U			X					U				
LYLY	5	Lynx		SU	U		R	X					U	U	U	U	
LYRU	4	Bobcat											U				
ALAL	5	American Moose					U	X					U				
RATA	5	Mountain Caribou		P			T	X	R				U				
OVCA	4	Bighorn Sheep			T		U	X		SU			U	U	U		

APPENDIX 3 COMPOSITE SPECIES OCCURRENCE AND ORIENTATION - AREA 2



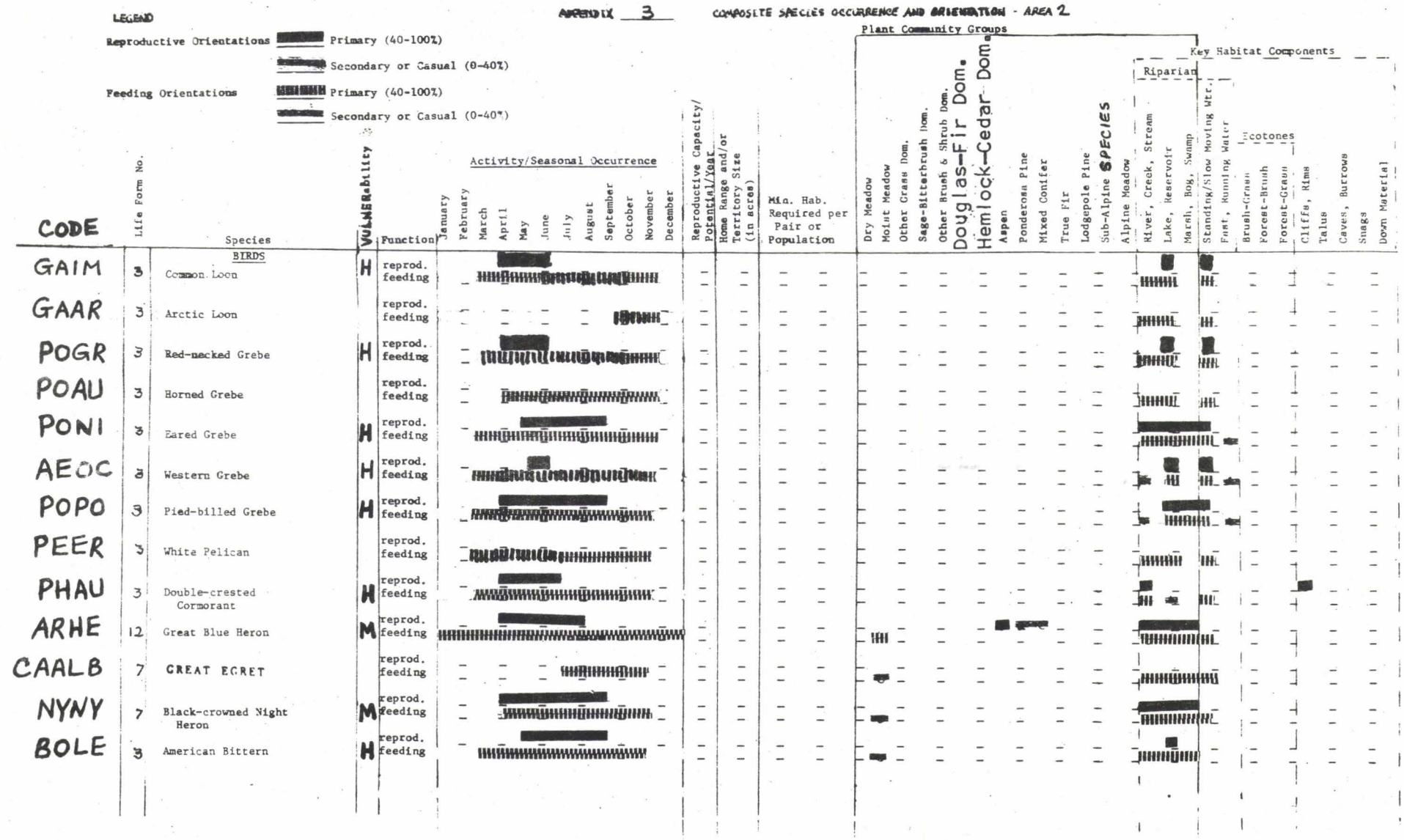
* NOT FOUND ON WENATCHEE N.F.
** FOUND ON WENATCHEE N.F.

APPENDIX 3 COMPOSITE SPECIES OCCURRENCE AND ORIENTATION - AREA 2



CODE	Life Form No.	HERPES Species	Vulnerability	Function
SCGR	5	Sagebrush Lizard	M	reprod. feeding
UTST	4	Side-blotched Lizard	H	reprod. feeding
PHDO	5	Short-horned Lizard	M	reprod. feeding
EUSK	5	Western Skink	M	reprod. feeding
GEMU	5	FOOTHILL ALLIGATOR LIZARD	M	reprod. feeding
GECO	5	NORTHERN ALLIGATOR LIZARD	M	reprod. feeding
CHBO	15	Rubber Boa	M	reprod. feeding
DIPU	3	WESTERN RINGNECK SNAKE	M	reprod. feeding
COCO	5	RACER	M	reprod. feeding
MATA	5	DESERT STRIPED WHIPSNAKE	M	reprod. feeding
PIME	5	Gopher Snake	M	reprod. feeding
THSI	3	Common Garter Snake	L	reprod. feeding
THEL	5	Western Garter Snake	M	reprod. feeding
THOR	5	NORTHWESTERN GARTER SNAKE	M	reprod. feeding
HYTO	5	SPOTTED NIGHT SNAKE	M	reprod. feeding
CRVI	5	Western Rattlesnake	L	reprod. feeding

APPENDIX 3 COMPOSITE SPECIES OCCURRENCE AND ORIENTATION - AREA 2

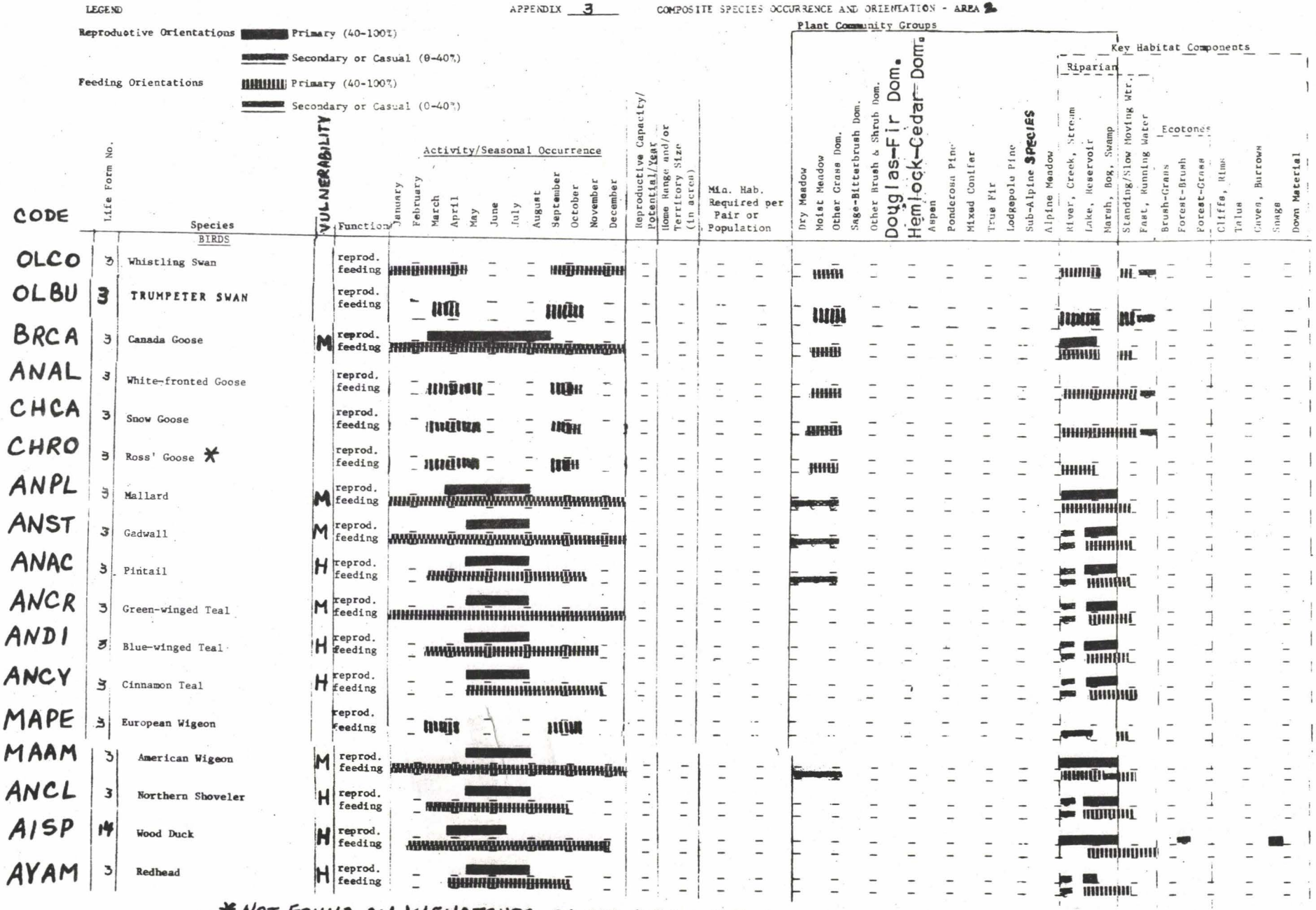


LEGEND

Reproductive Orientations — Primary (40-100%); Secondary or Casual (0-40%)

Feeding Orientations — Primary (40-100%); Secondary or Casual (0-40%)

APPENDIX 3 — COMPOSITE SPECIES OCCURRENCE AND ORIENTATION - AREA 2



CODE	Life Form No.	Species	VULNERABILITY	Function	Reproductive Capacity/ Potential/Year	Home Range and/or Territory Size (in acres)	Min. Hab. Required per Pair or Population
		BIRDS					
OLCO	3	Whistling Swan		reprod. feeding			
OLBU	3	TRUMPETER SWAN		reprod. feeding			
BRCA	3	Canada Goose	M	reprod. feeding			
ANAL	3	White-fronted Goose		reprod. feeding			
CHCA	3	Snow Goose		reprod. feeding			
CHRO	3	Ross' Goose *		reprod. feeding			
ANPL	3	Mallard	M	reprod. feeding			
ANST	3	Gadwall	M	reprod. feeding			
ANAC	3	Pintail	H	reprod. feeding			
ANCR	3	Green-winged Teal	M	reprod. feeding			
ANDI	3	Blue-winged Teal	H	reprod. feeding			
ANCY	3	Cinnamon Teal	H	reprod. feeding			
MAPE	3	European Wigeon		reprod. feeding			
MAAM	3	American Wigeon	M	reprod. feeding			
ANCL	3	Northern Shoveler	H	reprod. feeding			
AISP	14	Wood Duck	H	reprod. feeding			
AYAM	3	Redhead	H	reprod. feeding			

* NOT FOUND ON WENATCHEE OR OKANOGAN N.F.

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APPENDIX 3 COMPOSITE SPECIES OCCURRENCE AND ORIENTATION - AREA 2

LEGEND

Reproductive Orientations: Primary (40-100%); Secondary or Casual (0-40%)

Feeding Orientations: Primary (40-100%); Secondary or Casual (0-40%)

CODE	Life Form No.	Species	Vulnerability	Function	Activity/Seasonal Occurrence: January	February	March	April	May	June	July	August	September	October	November	December	Reproductive Capacity/ Potential/Year	Home Range and/or Territory Size (in acres)	Min. Hab. Required per Pair or Population	Plant Community Groups: Dry Meadow	Moist Meadow	Other Grass Dom.	Sage-Bitterbrush Dom.	Other Brush & Shrub Dom.	Douglas-Fir Dom.	Hemlock-Cedar Dom.	Aspen	Ponderosa Pine	Mixed Conifer	True Fir	Lodgepole Pine	Sub-Alpine	Alpine Meadow	Key Habitat Components: Riparian: River, Creek, Stream	Lake, Reservoir	Marsh, Bog, Swamp	Standing/Slow Moving Wtr.	Fast, Running Water	Ecotones: Brush-Grass	Forest-Brush	Forest-Grass	Cliffs, Rims	Talus	Caves, Burrows	Snags	Down Material
		BIRDS																																											
AYCO	3	Ring-necked Duck	M	reprod. feeding																																										
AYVA	3	Canvasback		reprod. feeding																																										
AYMA	3	Greater Scaup		reprod. feeding																																										
AYAF	3	Lesser Scaup	H	reprod. feeding																																										
BUCL	14	Common Goldeneye		reprod. feeding																																										
BUIS	14	Barrow's Goldeneye	H	reprod. feeding																																									
BUAL	14	Bufflehead	H	reprod. feeding																																									
CLHY	3	OLDSQUAW		reprod. feeding																																										
HIHI	3	Harlequin Duck	H	reprod. feeding																																										
MEDE	3	White-winged Scoter		reprod. feeding																																										
MEPE	3	SURF SCOTER		reprod. feeding																																										
OXJA	3	Ruddy Duck	H	reprod. feeding																																										
LOCU	14	HOODED MERGANSER	H	reprod. feeding																																										
MEMER	14	COMMON MERGANSER	H	reprod. feeding																																										
MESE	3	RED-BREASTED MERGANSER		reprod. feeding																																										

LEGEND

Reproductive Orientations — Primary (40-100%); Secondary or Casual (0-40%)

Feeding Orientations — Primary (40-100%); Secondary or Casual (0-40%)

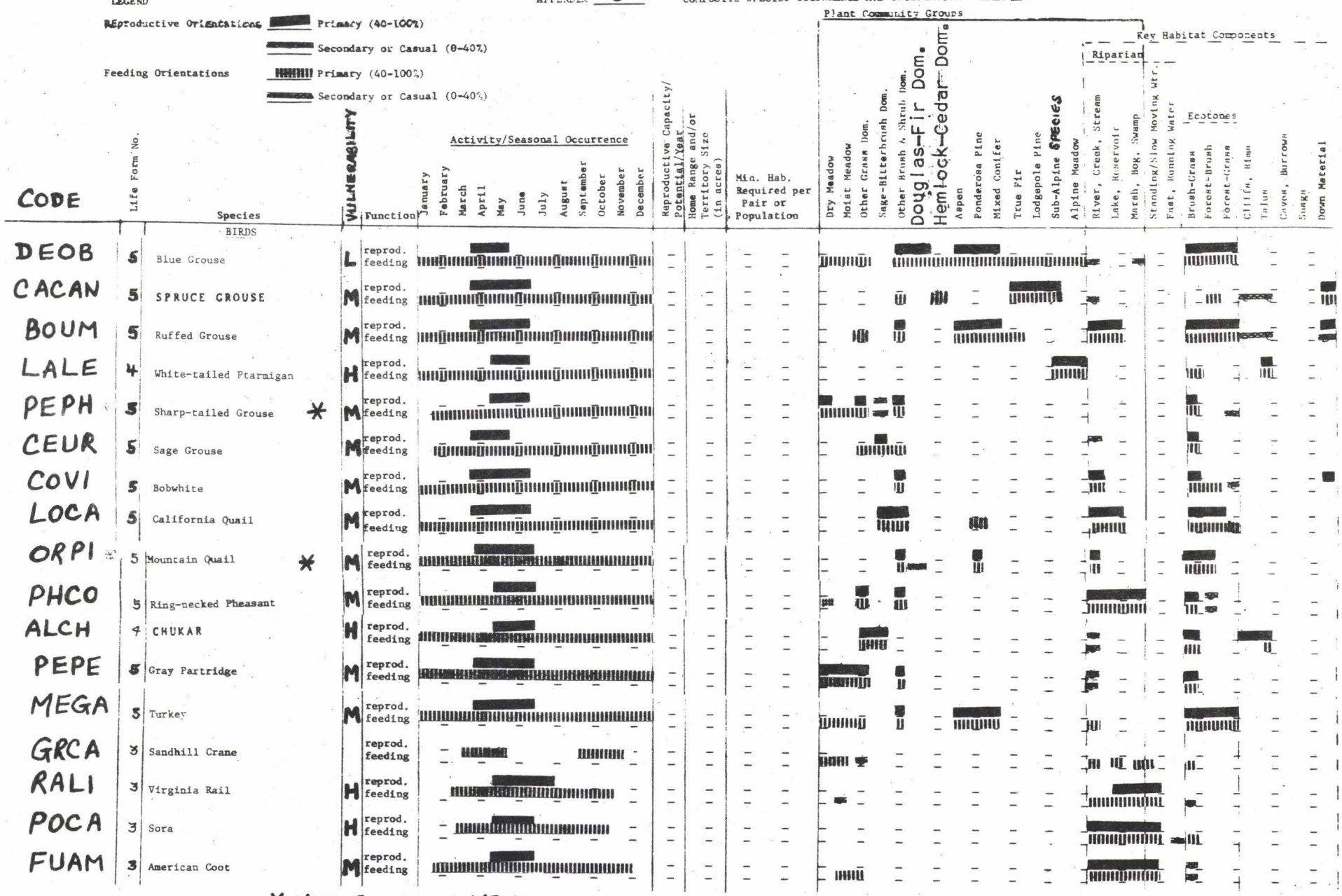
APPENDIX 3 COMPOSITE SPECIES OCCURRENCE AND ORIENTATION - AREA 2

CODE	Life Form No.	Species	VULNERABILITY	Function	Activity/Seasonal Occurrence: January	February	March	April	May	June	July	August	September	October	November	December	Reproductive Capacity/ Potential/Year	Home Range and/or Territory Size (in acres)	Min. Hab. Required per Pair or Population
		BIRDS																	
CAAU	4	Turkey Vulture	M	reprod. feeding															
ACGE	11	Goshawk	M	reprod. feeding															
ACST	11	Sharp-shinned Hawk	M	reprod. feeding															
ACCO	11	Cooper's Hawk	L	reprod. feeding															
BUJA	12	Red-tailed Hawk	L	reprod. feeding															
BUSW	7	Swainson's Hawk	M	reprod. feeding															
BULA	5	Rough-legged Hawk		reprod. feeding															
BURE	4	Ferruginous Hawk	H	reprod. feeding															
AQCH	12	GOLDEN EAGLE	L	reprod. feeding															
HALE	12	Bald Eagle	M	reprod. feeding															
CICY	3	Marsh Hawk	M	reprod. feeding															
PAHA	12	Osprey	H	reprod. feeding															
FARU	4	GYRFALCON		reprod. feeding															
FAME	4	Prairie Falcon	H	reprod. feeding															
FAPEA	4	AMERICAN Peregrine FALCON	M	reprod. feeding															
FAPET	4	ARCTIC PEREGRINE FALCON		reprod. feeding															
FACO	11	Merlin	L	reprod. feeding															
FASP	14	American Kestrel	M	reprod. feeding															

Plant Community Groups: Douglas-Fir Dom. (Dry Meadow; Moist Meadow; Other Grass Dom.; Sage-Bitterbrush Dom.; Other Brush & Shrub Dom.); Hemlock-Cedar Dom. (Aspen; Ponderosa Pine; Mixed Conifer; True Fir; Lodgepole Pine; Sub-Alpine Spruce; Alpine Meadow)

Key Habitat Components: Riparian (River, Creek, Stream; Lake, Reservoir; Marsh, Bog, Swamp; Standing/Slow Moving Wtr.; Fast, Running Water); Ecotones (Brush-Grass; Forest-Brush; Forest-Grass); Cliffs, Rims; Talus; Caves, Burrows; Snags; Down Material

APPENDIX 3 COMPOSITE SPECIES OCCURRENCE AND ORIENTATION - AREA 2



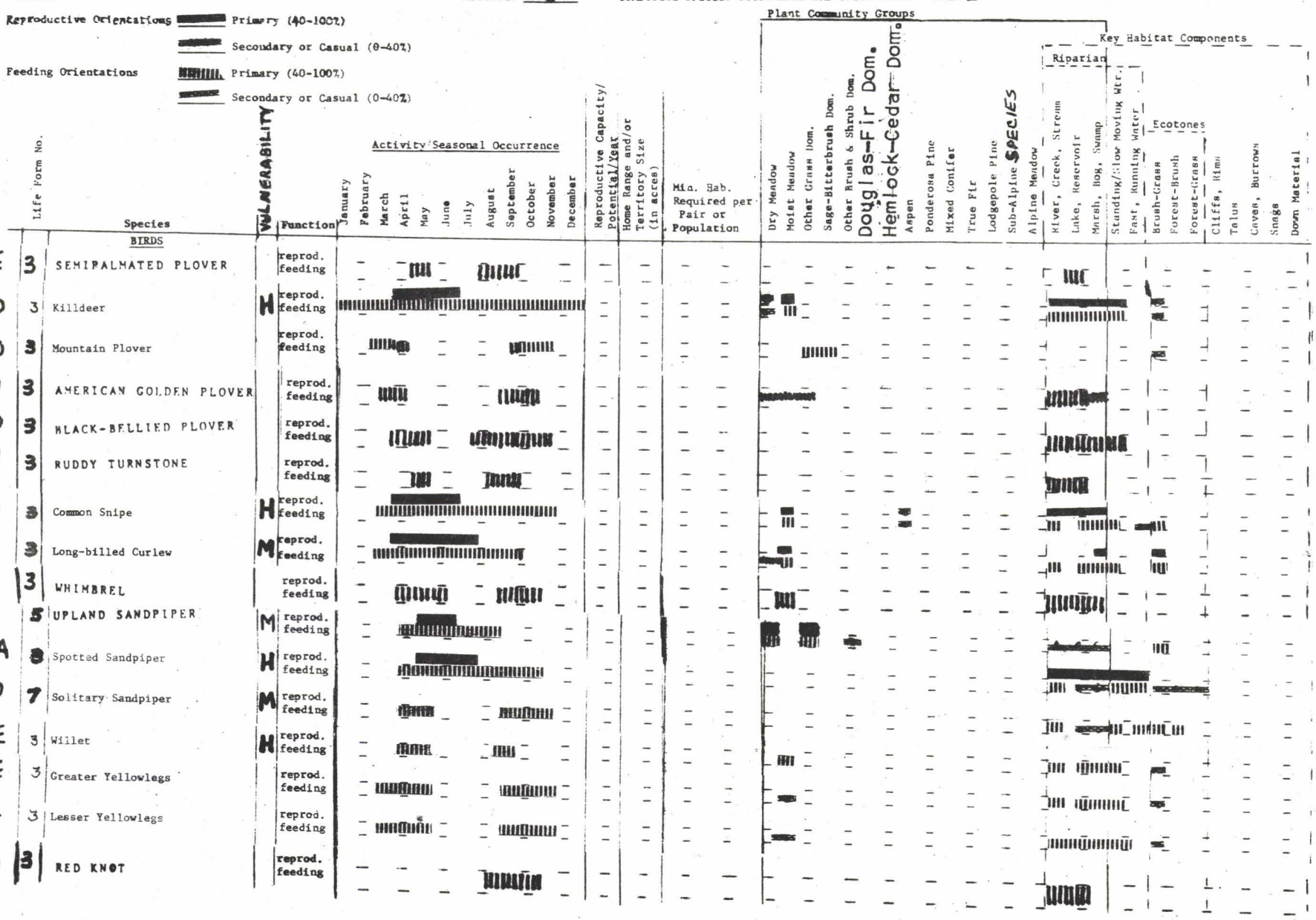
* NOT FOUND ON WENATCHEE N.F.

LEGEND

Reproductive Orientations: Primary (40-100%); Secondary or Casual (0-40%)

Feeding Orientations: Primary (40-100%); Secondary or Casual (0-40%)

APPENDIX 3 — COMPOSITE SPECIES OCCURRENCE AND ORIENTATION - AREA 2



LEGEND

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Feeding Orientations: Primary (40-100%); Secondary or Casual (0-40%)

APPENDIX 3 COMPOSITE SPECIES OCCURRENCE AND ORIENTATION - AREA 2

CODE	Life Form No.	Species	VULNERABILITY	Function	Activity/Seasonal Occurrence: January	February	March	April	May	June	July	August	September	October	November	December	Reproductive Capacity/ Potential/Year	Home Range and/or Territory Size (in acres)	Min. Hab. Required per Pair or Population	Plant Community Groups: Dry Meadow	Moist Meadow	Other Grass Dom.	Sage-Bitterbrush Dom.	Other Brush & Shrub Dom.	Douglas-Fir Dom.	Hemlock-Cedar-Dom.	Aspen	Ponderosa Pine	Mixed Conifer	True Fir	Lodgepole Pine	Sub-Alpine	Alpine Meadow	Key Habitat Components: Riparian: River, Creek, Stream	Lake, Reservoir	Marsh, Bog, Swamp	Standing/Slow Moving Wtr.	Fast, Running Water	Ecotones: Brush-Grass	Forest-Brush	Forest-Grass	Cliffs, Rims	Talus	Caves, Burrows	Snags	Down Material
		BIRDS																																											
CAME	3	Pectoral Sandpiper		reprod. feeding																																										
CAFU	3	WHITE-RUMPED SANDPIPER		reprod. feeding																																									
CABA	3	Baird's Sandpiper		reprod. feeding																																									
CAMI	3	Least Sandpiper		reprod. feeding																																									
CAFE	3	CURLEW SANDPIPER		reprod. feeding																																									
CAALP	3	DUNLIN		reprod. feeding																																									
CAPU	3	SEMIPALMATED SANDPIPER		reprod. feeding																																									
CAMA	3	Western Sandpiper		reprod. feeding																																									
CAAL	3	SANDERLING		reprod. feeding																																									
LIGR	3	SHORT-BILLED DOWITCHER		reprod. feeding																																									
LISC	3	Long-billed Dowitcher		reprod. feeding																																									
MIHI	3	STILT SANDPIPER		reprod. feeding																																									
TRSU	5	BUFF-BREASTED SANDPIPER		reprod. feeding																																									
LIFE	3	MARBLED GODWIT		reprod. feeding																																									

175

LEGEND

Reproductive Orientations: Primary (40-100%); Secondary or Casual (0-40%)

Feeding Orientations: Primary (40-100%); Secondary or Casual (0-40%)

APPENDIX 3 COMPOSITE SPECIES OCCURRENCE AND ORIENTATION - AREA 2

CODE	Life Form No.	Species	Vulnerability	Function	Activity/Seasonal Occurrence: January	February	March	April	May	June	July	August	September	October	November	December	Reproductive Capacity/ Potential/Year	Home Range and/or Territory Size (in acres)	Min. Hab. Required per Pair or Population	Plant Community Groups: Dry Meadow	Moist Meadow	Other Grass Dom.	Sage-Bitterbrush Dom.	Other Brush & Shrub Dom.	Douglas-Fir Dom.	Hemlock-Cedar Dom.	Aspen	Ponderosa Pine	Mixed Conifer	True Fir	Lodgepole Pine	Sub-Alpine SPECIES	Alpine Meadow	Key Habitat Components: Riparian: River, Creek, Stream	Lake, Reservoir	Marsh, Bog, Swamp	Standing/Slow Moving Wtr.	Fast, Running Water	Ecotones: Brush-Grass	Forest-Brush	Forest-Grass	Cliffs, Rims	Talus	Caves, Burrows	Snags	Down Material
AMAV	3	AMERICAN AVOCET	M	reprod. feeding																																										
BNST	3	BLACK-NECKED STILT		reprod. feeding																																											
WIPH	3	WILSON'S PHALAROPE	H	reprod. feeding																																										
NOPH	3	NORTHERN PHALAROPE		reprod. feeding																																										
LTJA	5	LONG-TAILED JAEGER		reprod. feeding																																										
GLGU	4	GLAUCOUS GULL		reprod. feeding																																										
ICGU	3	ICELAND GULL		reprod. feeding																																										
GWGU	3	GLAUCOUS-WINGED GULL		reprod. feeding																																										

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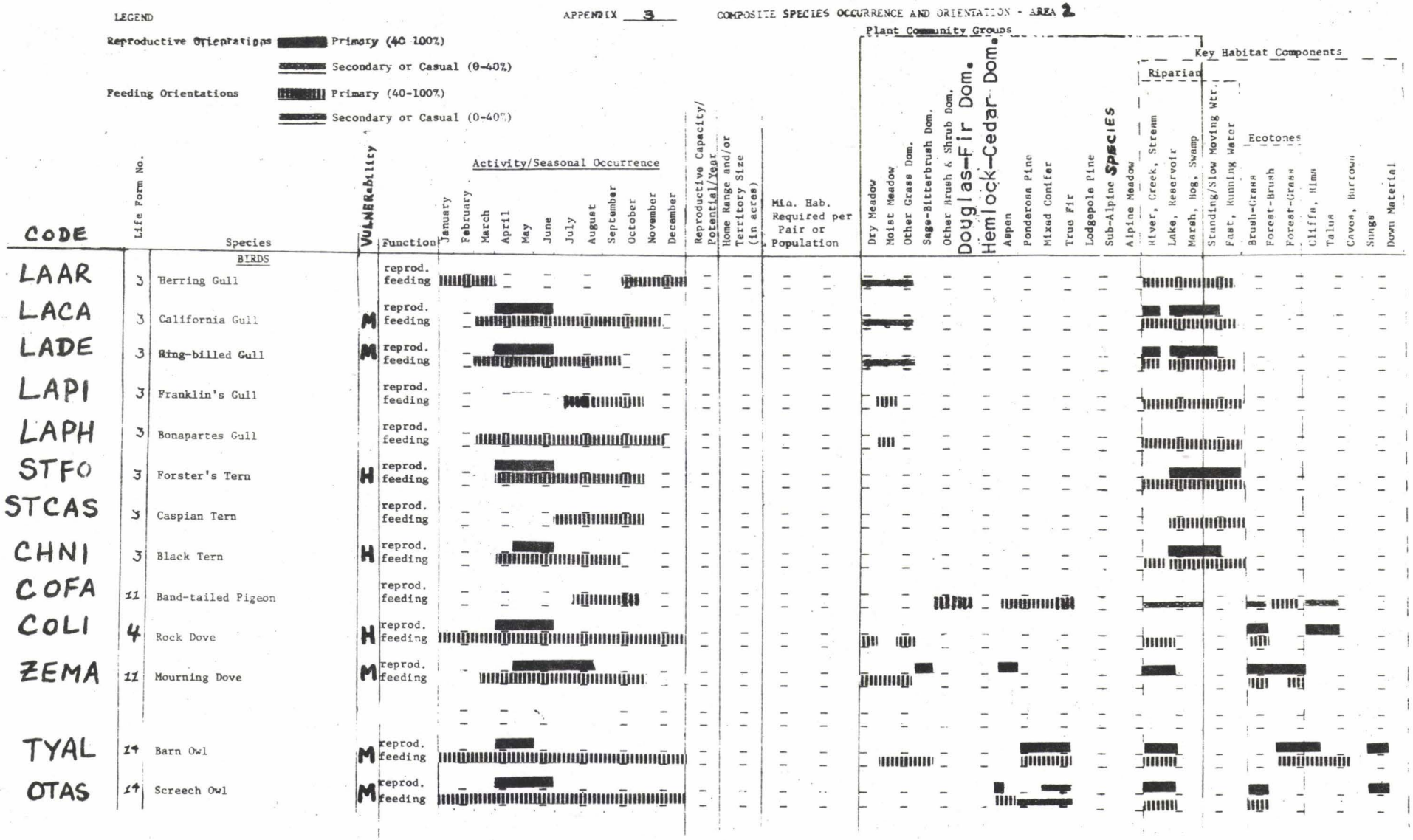
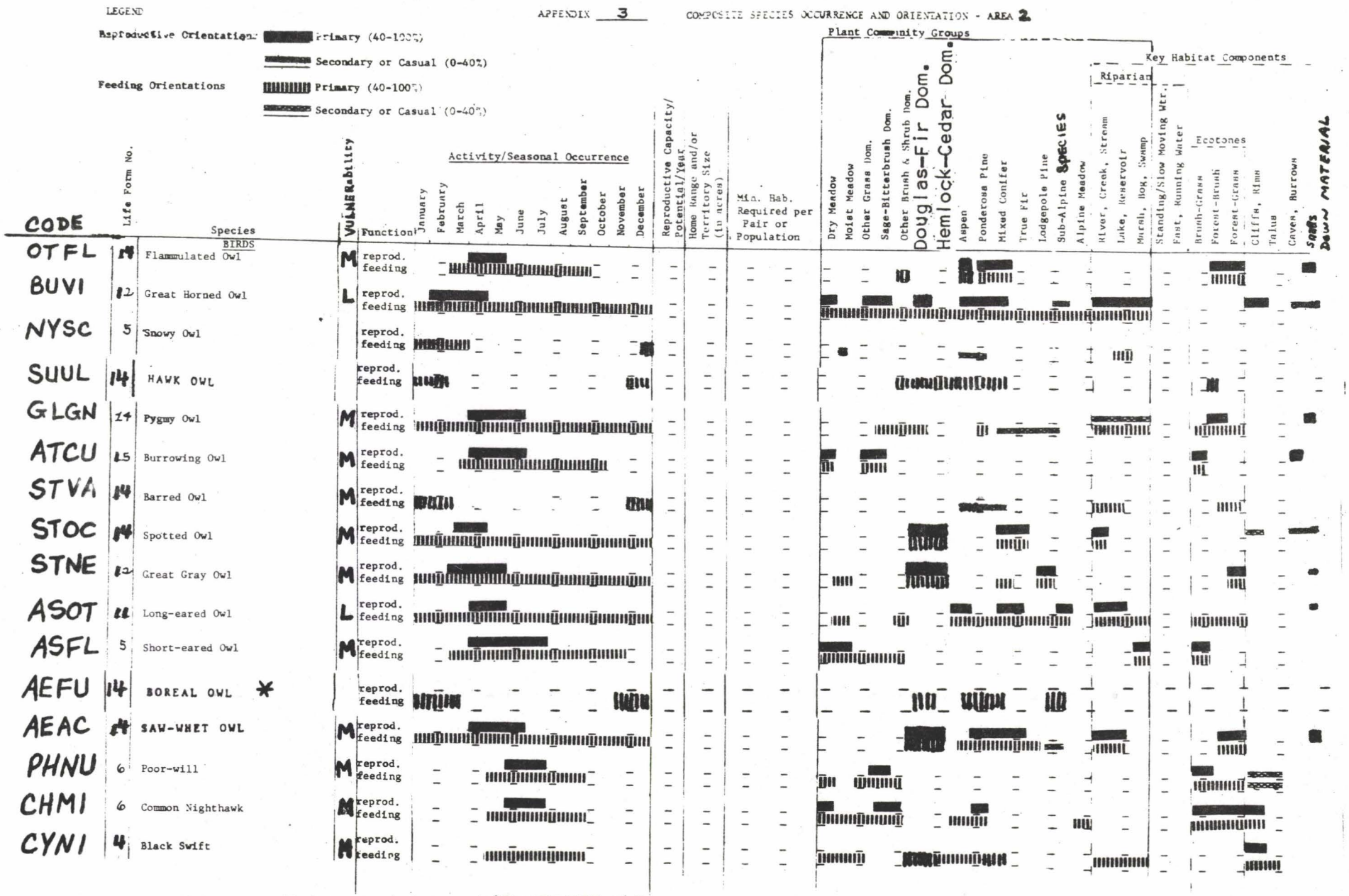
LEGEND

Reproductive Orientations — Primary (40-100%); Secondary or Casual (0-40%)

Feeding Orientations — Primary (40-100%); Secondary or Casual (0-40%)

APPENDIX 3 COMPOSITE SPECIES OCCURRENCE AND ORIENTATION - AREA 2





*NOT FOUND ON WENATCHEE N.F.

871

LEGEND

Reproductive Orientations — Primary (40-100%); Secondary or Casual (0-40%)

Feeding Orientations — Primary (40-100%); Secondary or Casual (0-40%)

APPENDIX 3 COMPOSITE SPECIES OCCURRENCE AND ORIENTATION - AREA 2

CODE	Life Form No.	Species	VULNERABILITY	Function	Activity/Seasonal Occurrence: January	February	March	April	May	June	July	August	September	October	November	December	Reproductive Capacity/ Potential/Year	Home Range and/or Territory Size (In acres)	Min. Hab. Required per Pair or Population
		BIRDS																	
CHVA	14	Vaux's Swift	M	reprod. feeding															
AESA	4	White-throated Swift	H	reprod. feeding															
ARAL	7	Black-chinned Hummingbird	M	reprod. feeding															
SERU	11	Rufous Hummingbird	L	reprod. feeding															
STCA	7	Calliope Hummingbird	L	reprod. feeding															
MEAL	16	Belted Kingfisher	H	reprod. feeding															
COAU	13	Common Flicker	L	reprod. feeding															
DRPI	13	Pileated Woodpecker	M	reprod. feeding															
MELE	13	Lewis' Woodpecker	M	reprod. feeding															
SPVA	13	YELLOW-BELLIED SAPSUCKER	M	reprod. feeding															
SPTH	13	Williamson's Sapsucker	M	reprod. feeding															
PIVI	13	Hairy Woodpecker	M	reprod. feeding															
PIPU	13	Downy Woodpecker	M	reprod. feeding															
PIAL	13	White-headed Woodpecker	M	reprod. feeding															
PIAR	13	Black-backed Three-toed Woodpecker	M	reprod. feeding															
PITR	13	Northern Three-toed Woodpecker	M	reprod. feeding															

Plant Community Groups: Dry Meadow; Moist Meadow; Other Grass Dom.; Sage-Bitterbrush Dom.; Other Brush & Shrub Dom.; Douglas-Fir Dom.; Hemlock-Cedar Dom.; Aspen; Ponderosa Pine; Mixed Conifer; True Fir; Lodgepole Pine; Sub-Alpine SPECIES; Alpine Meadow

Key Habitat Components: Riparian (River, Creek, Stream; Lake, Reservoir; Marsh, Bog, Swamp; Standing/Slow Moving Wtr.; Fast, Running Water); Ecotones (Brush-Grass; Forest-Brush; Forest-Grass; Cliffs, Rims; Talus; Caves, Burrows; Snags; Down Material)

APPENDIX 3 — COMPOSITE SPECIES OCCURRENCE AND ORIENTATION - AREA 2

LEGEND

Reproductive Orientations: Primary (40-100%); Secondary or Casual (0-40%)

Feeding Orientations: Primary (40-100%); Secondary or Casual (0-40%)

CODE	Life Form No.	Species	VULNERABILITY	Function	Activity/Seasonal Occurrence: January	February	March	April	May	June	July	August	September	October	November	December	Reproductive Capacity/ Potential/Year	Home Range and/or Territory Size (in acres)	Min. Hab. Required per Pair or Population
		BIRDS																	
TYTY	7	Eastern Kingbird	M	reprod.															
				feeding															
TYVE	11	Western Kingbird	M	reprod.															
				feeding															
MYCI	14	Ash-throated Fly-catcher	M	reprod.															
				feeding															
SASA	4	Say's Phoebe	M	reprod.															
				feeding															
EMTR	7	Willow Flycatcher	M	reprod.															
				feeding															
EMHA	11	Hammond's Flycatcher	M	reprod.															
				feeding															
EMOB	8	Dusky Flycatcher	M	reprod.															
				feeding															
EMDI	10	Western Flycatcher	M	reprod.															
				feeding															
COSO	11	Western Wood Pewee	L	reprod.															
				feeding															
NUBO	10	Olive-sided Flycatcher	L	reprod.															
				feeding															
ERAL	5	Horned Lark	M	reprod.															
				feeding															
TATH	14	Violet-Green Swallow	M	reprod.															
				feeding															
IRBI	14	Tree Swallow	M	reprod.															
				feeding															
RIRI	16	Bank Swallow	H	reprod.															
				feeding															
STRU	16	Rough-winged Swallow	H	reprod.															
				feeding															
HIRU	4	Barn Swallow	H	reprod.															
				feeding															
PEPY	4	Cliff Swallow	H	reprod.															
				feeding															

Plant Community Groups: Dry Meadow; Moist Meadow; Other Grass Dom.; Sage-Bitterbrush Dom.; Other Brush & Shrub Dom.; Douglas-Fir Dom.; Hemlock-Cedar Dom.; Aspen; Ponderosa Pine; Mixed Conifer; True Fir; Lodgepole Pine; Sub-Alpine SPECIES; Alpine Meadow

Key Habitat Components: Riparian — River, Creek, Stream; Lake, Reservoir; Marsh, Bog, Swamp; Standing/Slow Moving Wtr.; Fast, Running Water; Ecotones — Brush-Grass; Forest-Brush; Forest-Grass; Cliffs, Rims; Talus; Caves, Burrows; Snags; Down Material

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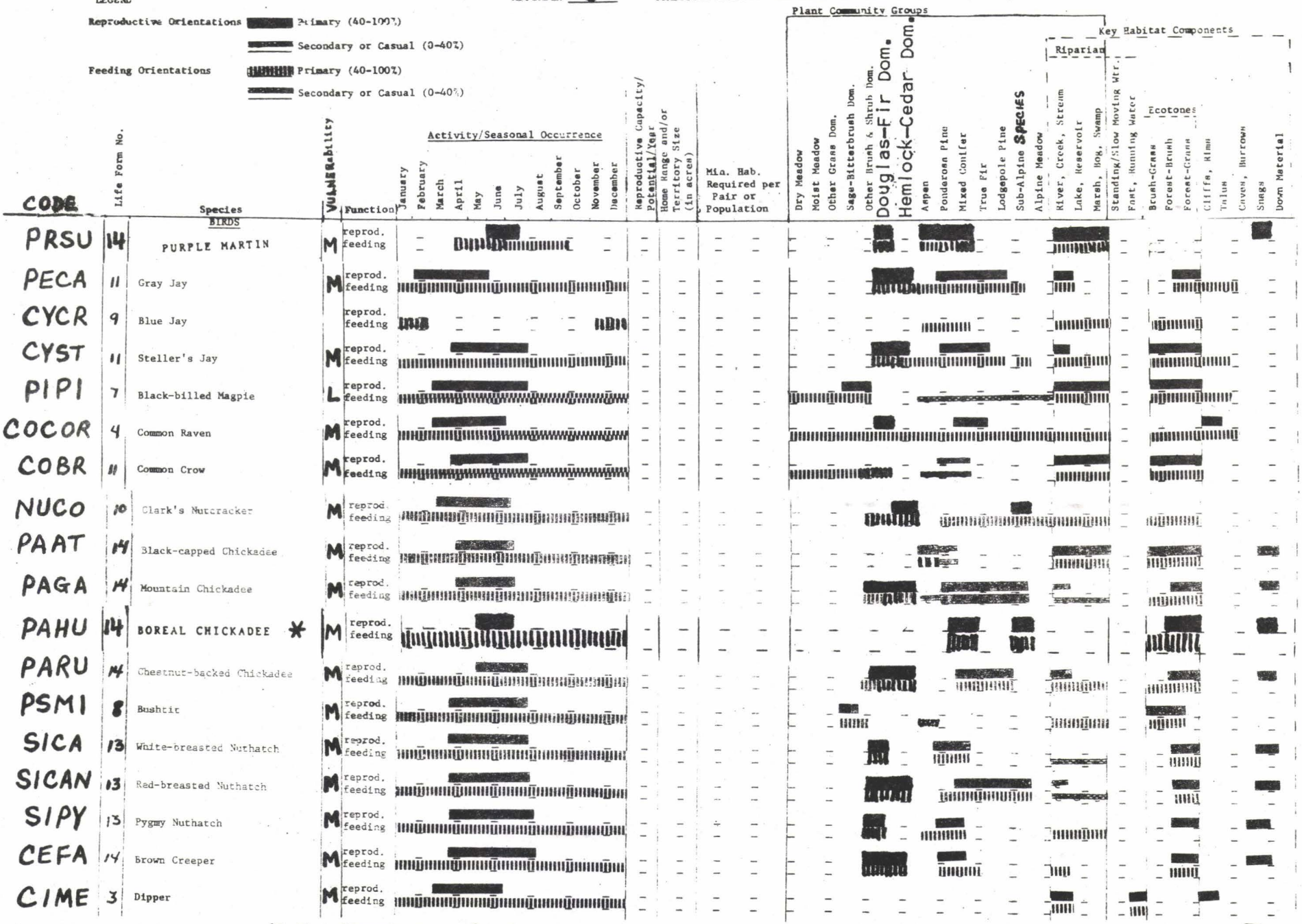
APPENDIX 3 COMPOSITE SPECIES OCCURRENCE AND ORIENTATION - AREA 2



CODE	Life Form No.	Species	VULNERability	Function
		BIRDS		
PRSU	14	PURPLE MARTIN	M	reprod. feeding
PECA	11	Gray Jay	M	reprod. feeding
CYCR	9	Blue Jay		reprod. feeding
CYST	11	Steller's Jay	M	reprod. feeding
PIPI	7	Black-billed Magpie	L	reprod. feeding
COCOR	4	Common Raven	M	reprod. feeding
COBR	11	Common Crow	M	reprod. feeding
NUCO	10	Clark's Nutcracker	M	reprod. feeding
PAAT	14	Black-capped Chickadee	M	reprod. feeding
PAGA	14	Mountain Chickadee	M	reprod. feeding
PAHU	14	BOREAL CHICKADEE *	M	reprod. feeding
PARU	14	Chestnut-backed Chickadee	M	reprod. feeding
PSMI	8	Bushtit	M	reprod. feeding
SICA	13	White-breasted Nuthatch	M	reprod. feeding
SICAN	13	Red-breasted Nuthatch	M	reprod. feeding
SIPY	13	Pygmy Nuthatch	M	reprod. feeding
CEFA	14	Brown Creeper	M	reprod. feeding
CIME	3	Dipper	M	reprod. feeding

* NOT FOUND ON WENATCHEE N.F.

LEGEND

Reproductive Orientations: Primary (40-100%); Secondary or Casual (0-40%)

Feeding Orientations: Primary (40-100%); Secondary or Casual (0-40%)

APPENDIX 3 · COMPOSITE SPECIES OCCURRENCE AND ORIENTATION - AREA 2

CODE	Life Form No.	Species	VULNERABILITY	Function	Activity/Seasonal Occurrence: January	February	March	April	May	June	July	August	September	October	November	December	Reproductive Capacity/ Potential/Year	Home Range and/or Territory Size (in acres)	Min. Hab. Required per Pair or Population
		BIRDS																	
TRAE	14	House Wren	M	reprod. feeding															
TRTR	3	Winter Wren	M	reprod. feeding															
THBE	14	BEWICK'S WREN **	M	reprod. feeding															
CIPA	3	Long-billed Marsh Wren	H	reprod. feeding															
CAMEX	4	CANYON WREN	H	reprod. feeding															
SAOB	4	Rock Wren	H	reprod. feeding															
DUCA	7	Gray Catbird	M	reprod. feeding															
ORMO	7	Sage Thrasher	M	reprod. feeding															
TUMI	7	American Robin	L	reprod. feeding															
IXNA	11	Varied Thrush	M	reprod. feeding															
CAGU	5	Hermit Thrush	M	reprod. feeding															
BUSW	7	SWAINSON'S THRUSH	M	reprod. feeding															
HYFU	5	Veery	M	reprod. feeding															
SIME	14	Western Bluebird	M	reprod. feeding															
SICU	14	Mountain Bluebird	M	reprod. feeding															
MYTO	6	Townsend's Solitaire	M	reprod. feeding															

Plant Community Groups: Douglas-Fir Dom. · Hemlock-Cedar Dom. · SPECIES

Dry Meadow; Moist Meadow; Other Grass Dom.; Sage-Bitterbrush Dom.; Other Brush & Shrub Dom.; Aspen; Ponderosa Pine; Mixed Conifer; True Fir; Lodgepole Pine; Sub-Alpine; Alpine Meadow

Key Habitat Components

Riparian: River, Creek, Stream; Lake, Reservoir; Marsh, Bog, Swamp

Standing/Slow Moving Wtr.; Fast, Running Water

Ecotones: Brush-Grass; Forest-Brush; Forest-Grass

Cliffs, Rims; Talus; Caves, Burrows; Snags; Down Material

** FOUND IN YAKIMA COUNTY, WENATCHEE N.F.

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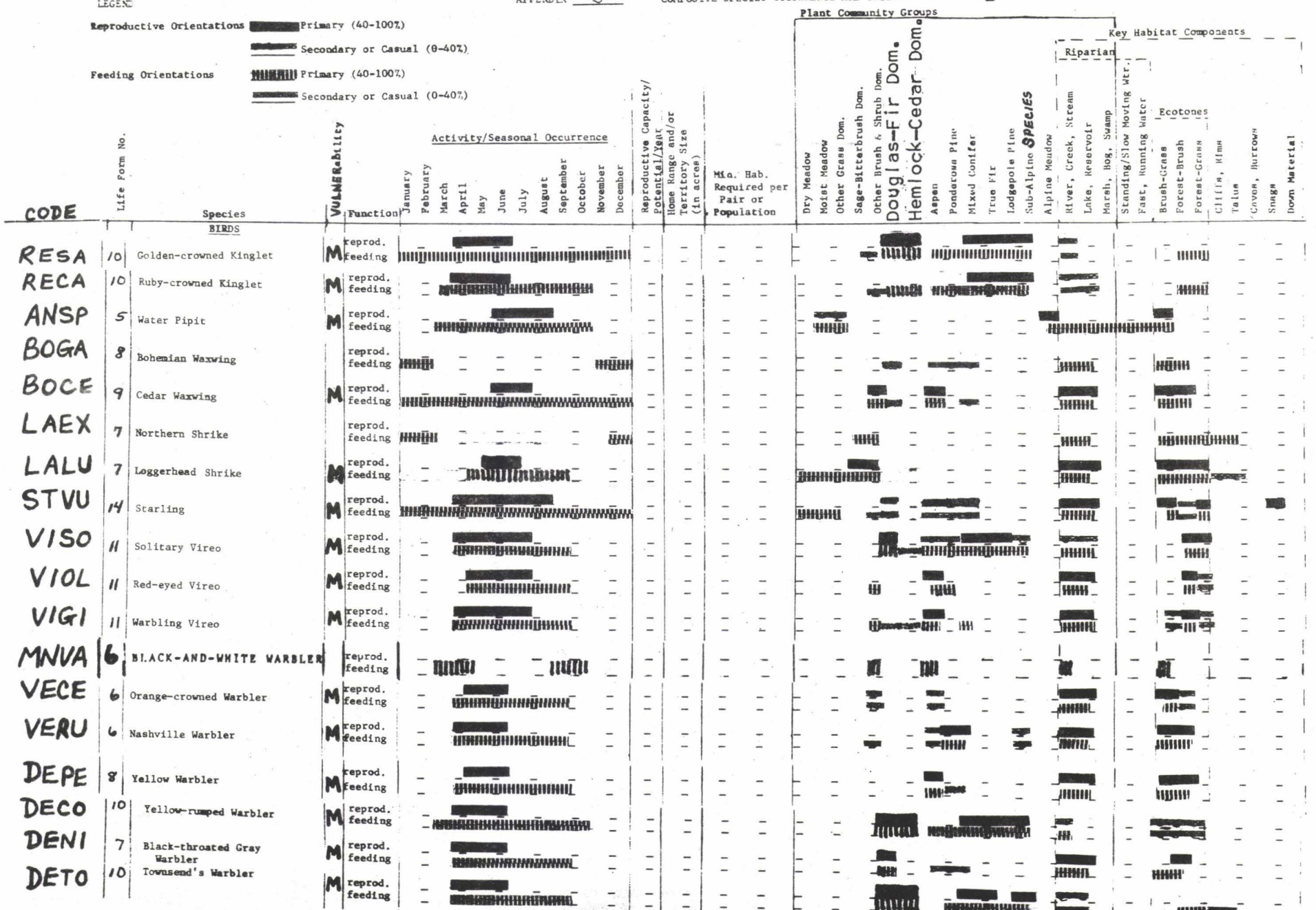
APPENDIX 3 COMPOSITE SPECIES OCCURRENCE AND ORIENTATION - AREA 2

LEGEND

Reproductive Orientations: Primary (40-100%); Secondary or Casual (0-40%)

Feeding Orientations: Primary (40-100%); Secondary or Casual (0-40%)



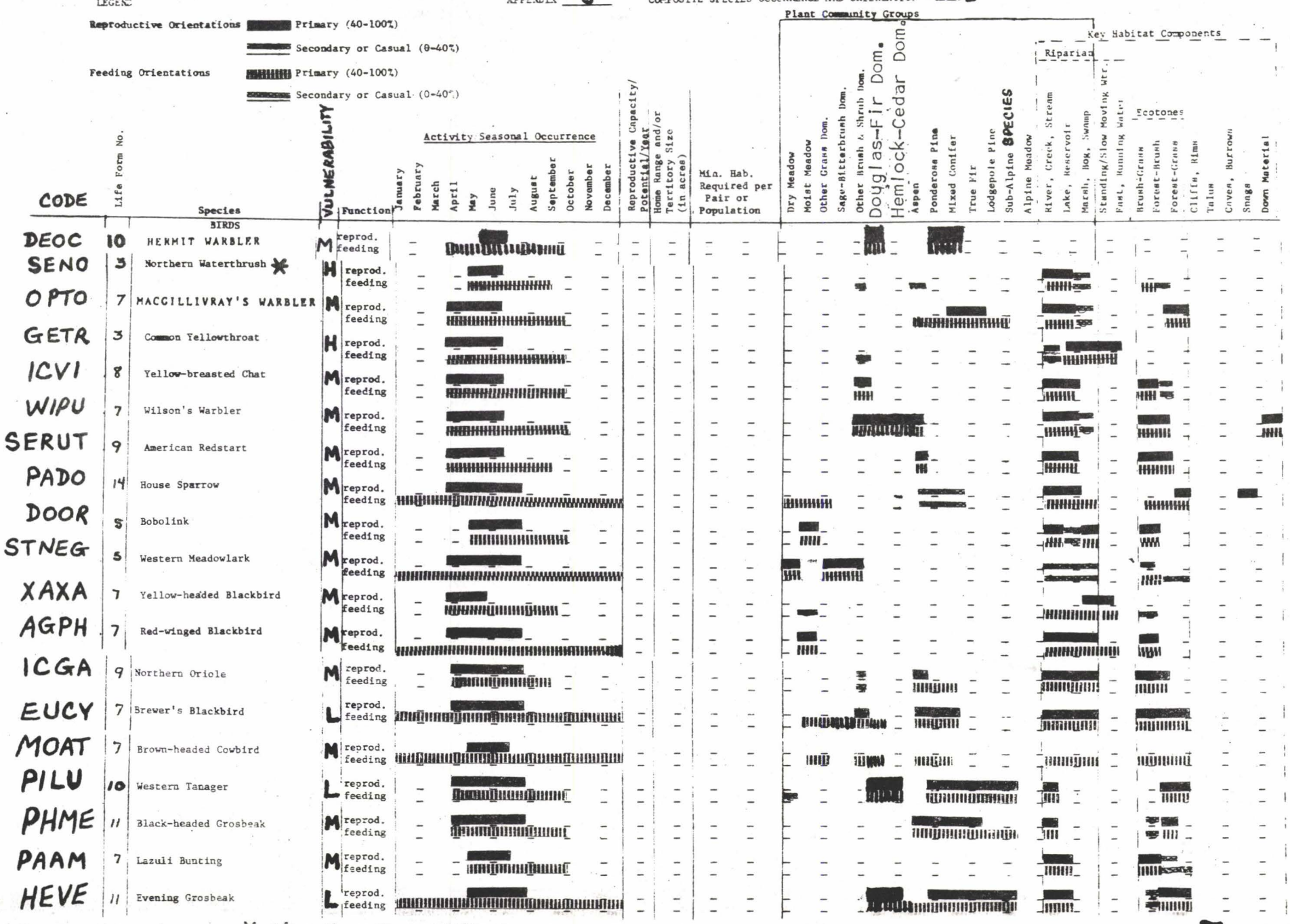
CODE	Life Form No.	Species	Vulnerability	Function
		BIRDS		
RESA	10	Golden-crowned Kinglet	M	reprod. feeding
RECA	10	Ruby-crowned Kinglet	M	reprod. feeding
ANSP	5	Water Pipit	M	reprod. feeding
BOGA	8	Bohemian Waxwing		reprod. feeding
BOCE	9	Cedar Waxwing	M	reprod. feeding
LAEX	7	Northern Shrike		reprod. feeding
LALU	7	Loggerhead Shrike	M	reprod. feeding
STVU	14	Starling	M	reprod. feeding
VISO	11	Solitary Vireo	M	reprod. feeding
VIOL	11	Red-eyed Vireo	M	reprod. feeding
VIGI	11	Warbling Vireo	M	reprod. feeding
MNVA	6	BLACK-AND-WHITE WARBLER		reprod. feeding
VECE	6	Orange-crowned Warbler	M	reprod. feeding
VERU	6	Nashville Warbler	M	reprod. feeding
DEPE	8	Yellow Warbler	M	reprod. feeding
DECO	10	Yellow-rumped Warbler	M	reprod. feeding
DENI	7	Black-throated Gray Warbler	M	reprod. feeding
DETO	10	Townsend's Warbler	M	reprod. feeding

APPENDIX 3 COMPOSITE SPECIES OCCURRENCE AND ORIENTATION - AREA 2

LEGEND

Reproductive Orientations: Primary (40-100%); Secondary or Casual (0-40%)

Feeding Orientations: Primary (40-100%); Secondary or Casual (0-40%)



APPENDIX 3 COMPOSITE SPECIES OCCURRENCE AND ORIENTATION - AREA 2

LEGEND

Reproductive Orientations — Primary (40-100%); Secondary or Casual (0-40%)

Feeding Orientations — Primary (40-100%); Secondary or Casual (0-40%)

CODE	Life Form No.	Species	Vulnerability	Function	Reproductive Capacity/ Potential/Year	Home Range and/or Territory Size (in acres)	Min. Hab. Required per Pair or Population
		BIRDS					
CACAS	11	Cassin's Finch	M	reprod. feeding			
CAMEXI	9	House Finch	M	reprod. feeding			
PIEN	11	Pine Grosbeak	M	reprod. feeding			
LETE	4	Gray-crowned Rosy Finch	H	reprod. feeding			
CAFL	7	COMMON REDPOLL		reprod. feeding			
CAPI	11	Pine Siskin	L	reprod. feeding			
CATR	7	American Goldfinch	M	reprod. feeding			
LOCUR	10	Red Crossbill	M	reprod. feeding			
LOLE	10	White-winged Crossbill	M	reprod. feeding			
PIER	7	Rufous-sided Towhee	M	reprod. feeding			
PASA	5	Savannah Sparrow	M	reprod. feeding			
AMSA	5	Grasshopper Sparrow	M	reprod. feeding			
POGRA	5	Vesper Sparrow	M	reprod. feeding			
CHGR	5	Lark Sparrow	M	reprod. feeding			
AMBE	7	Sage Sparrow	M	reprod. feeding			

LEGEND

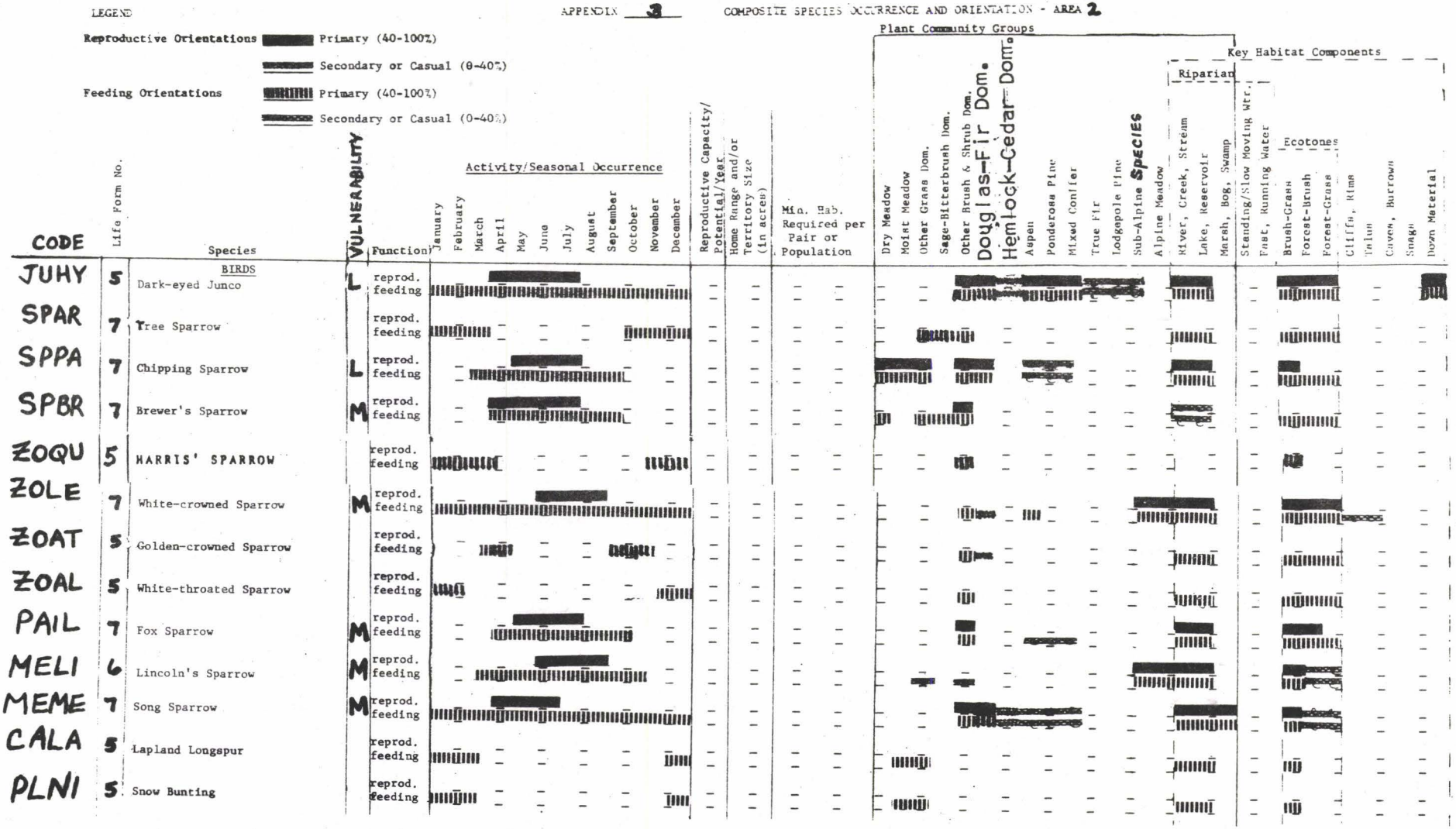
APPENDIX 3 COMPOSITE SPECIES OCCURRENCE AND ORIENTATION - AREA 2

Reproductive Orientations Primary (40-100%)

Secondary or Casual (0-40%)

Feeding Orientations Primary (40-100%)

Secondary or Casual (0-40%)



CODE	Life Form No.	Species	VULNERABILITY	Function	Reproductive Capacity/ Potential/Year	Home Range and/or Territory Size (in acres)	Min. Hab. Required per Pair or Population
		BIRDS					
JUHY	5	Dark-eyed Junco	L	reprod. feeding			
SPAR	7	Tree Sparrow		reprod. feeding			
SPPA	7	Chipping Sparrow	L	reprod. feeding			
SPBR	7	Brewer's Sparrow	M	reprod. feeding			
ZOQU	5	HARRIS' SPARROW		reprod. feeding			
ZOLE	7	White-crowned Sparrow	M	reprod. feeding			
ZOAT	5	Golden-crowned Sparrow		reprod. feeding			
ZOAL	5	White-throated Sparrow		reprod. feeding			
PAIL	7	Fox Sparrow	M	reprod. feeding			
MELI	6	Lincoln's Sparrow	M	reprod. feeding			
MEME	7	Song Sparrow	M	reprod. feeding			
CALA	5	Lapland Longspur		reprod. feeding			
PLNI	5	Snow Bunting		reprod. feeding			

LEGEND

Reproductive Orientations — Primary (40-100%); Secondary or Casual (0-40%)

Feeding Orientations — Primary (40-100%); Secondary or Casual (0-40%)

APPENDIX 3 — COMPOSITE SPECIES OCCURRENCE AND ORIENTATION - AREA 2

CODE	Life Form No.	Species	VULNERABILITY	Function	Activity/Seasonal Occurrence: January	February	March	April	May	June	July	August	September	October	November	December	Reproductive Capacity/ Potential/Year	Home Range and/or Territory Size (in acres)	Min. Hab. Required per Pair or Population	Plant Community Groups: Dry Meadow	Moist Meadow	Other Grass Dom.	Sage-Bitterbrush Dom.	Other Brush & Shrub Dom.	Douglas-Fir Dom.	Hemlock-Cedar Dom.	Aspen	Ponderosa Pine	Mixed Conifer	True Fir	Lodgepole Pine	Sub-Alpine SPECIES	Alpine Meadow	Key Habitat Components: Riparian: River, Creek, Stream	Lake, Reservoir	Marsh, Bog, Swamp	Standing/Slow Moving Wtr.	Fast, Running Water	Brush-Grass Ecotones	Forest-Brush	Forest-Grass	Cliffs, Rims	Talus	Caves, Burrows	Snags	Down Material
		MAMMALS																																											
DIVI	5	Opossum **	M	reprod. feeding																																										
SOCI	15	MASKED SHREW	M	reprod. feeding													1-10 EACH LITTER																														
SOTR	15	TROWBRIDGE'S SHREW	M	reprod. feeding													3-6																														
SOVA	15	Vagrant Shrew	M	reprod. feeding																																										
SOOB	15	Dusky Shrew	M	reprod. feeding																																										
SOPA	16	Northern Water Shrew	M	reprod. feeding																																										
MIHO	15	PYGMY SHREW*		REPROD. FEEDING																																										
NEGI	15	SHREW-MOLE	L	reprod. feeding																																										
SCOR	15	Coast Mole	L	reprod. feeding																																										
MYLU	14	LITTLE BROWN BAT	M	reprod. feeding																																										
MYYU	14	Yuma Myotis	H	reprod. feeding																																										
MYKE	4	KEEN'S MYOTIS	H	reprod. feeding																																										
MYEV	14	Long-eared Myotis	M	reprod. feeding																																										
MYVO	14	Long-legged Myotis	M	reprod. feeding																																										
MYCA	14	California Myotis	M	reprod. feeding																																										
MYLE	4	Small-footed Myotis	H	reprod. feeding																																										

* NOT FOUND ON WENATCHEE OR OKANOGAN N.F.

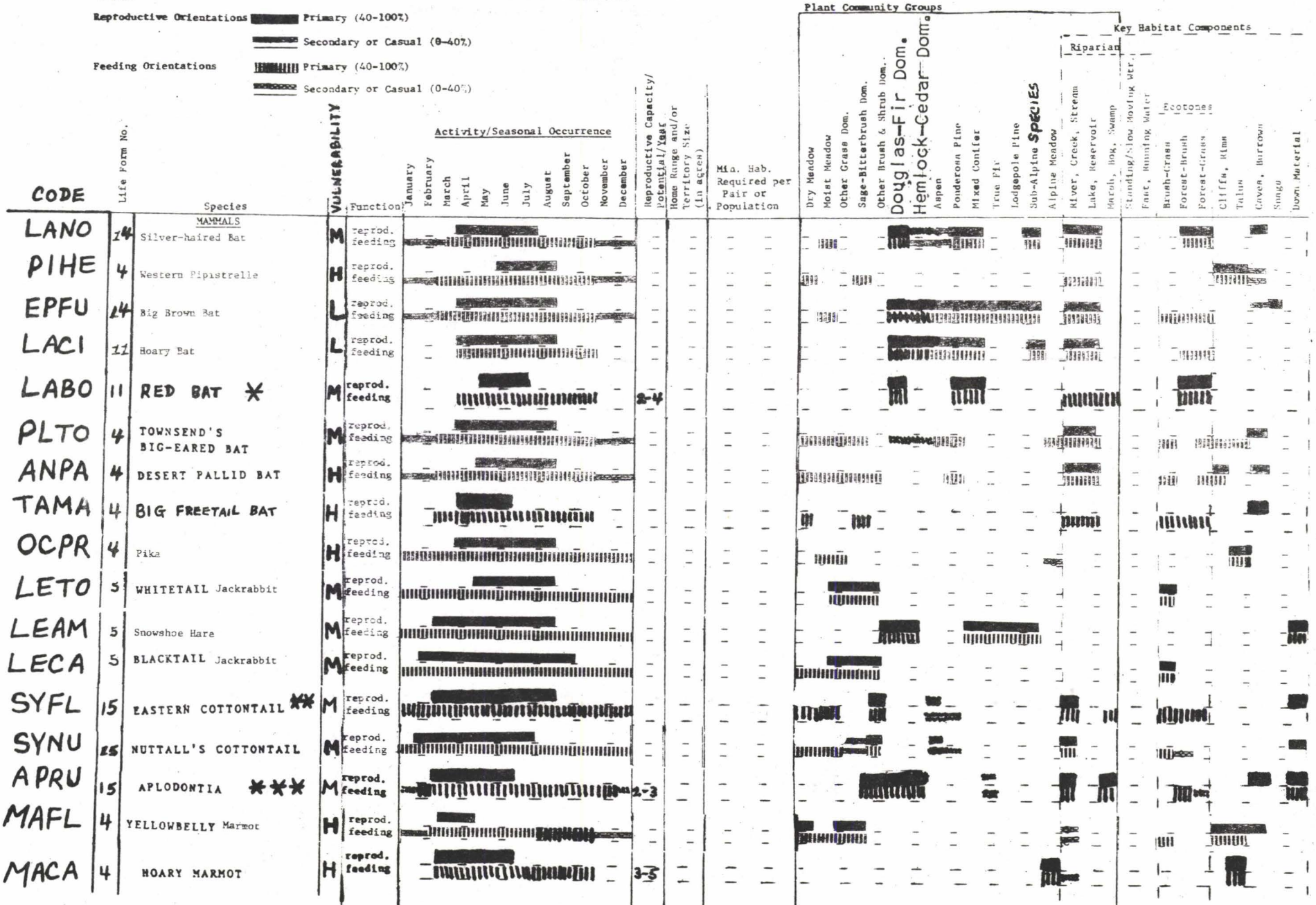
** FOUND ON WENATCHEE N.F.

LEGEND

Reproductive Orientations — Primary (40-100%); Secondary or Casual (0-40%)

Feeding Orientations — Primary (40-100%); Secondary or Casual (0-40%)

APPENDIX 3 — COMPOSITE SPECIES OCCURRENCE AND ORIENTATION - AREA 2



CODE	Life Form No.	Species	VULNERABILITY	Function	Reproductive Capacity/ Potential/Year
		MAMMALS			
LANO	14	Silver-haired Bat	M	reprod. feeding	
PIHE	4	Western Pipistrelle	H	reprod. feeding	
EPFU	14	Big Brown Bat	L	reprod. feeding	
LACI	11	Hoary Bat	L	reprod. feeding	
LABO	11	RED BAT *	M	reprod. feeding	2-4
PLTO	4	TOWNSEND'S BIG-EARED BAT	M	reprod. feeding	
ANPA	4	DESERT PALLID BAT	H	reprod. feeding	
TAMA	4	BIG FREETAIL BAT	H	reprod. feeding	
OCPR	4	Pika	H	reprod. feeding	
LETO	5	WHITETAIL Jackrabbit	M	reprod. feeding	
LEAM	5	Snowshoe Hare	M	reprod. feeding	
LECA	5	BLACKTAIL Jackrabbit	M	reprod. feeding	
SYFL	15	EASTERN COTTONTAIL **	M	reprod. feeding	
SYNU	15	NUTTALL'S COTTONTAIL	M	reprod. feeding	
APRU	15	APLODONTIA ***	M	reprod. feeding	2-3
MAFL	4	YELLOWBELLY Marmot	H	reprod. feeding	
MACA	4	HOARY MARMOT	H	reprod. feeding	3-5

* NOT FOUND ON WENATCHEE OR OKANOGAN N.F.

** FOUND ON WENATCHEE N.F. IN KITTITAS COUNTY

*** NOT FOUND ON [illegible]

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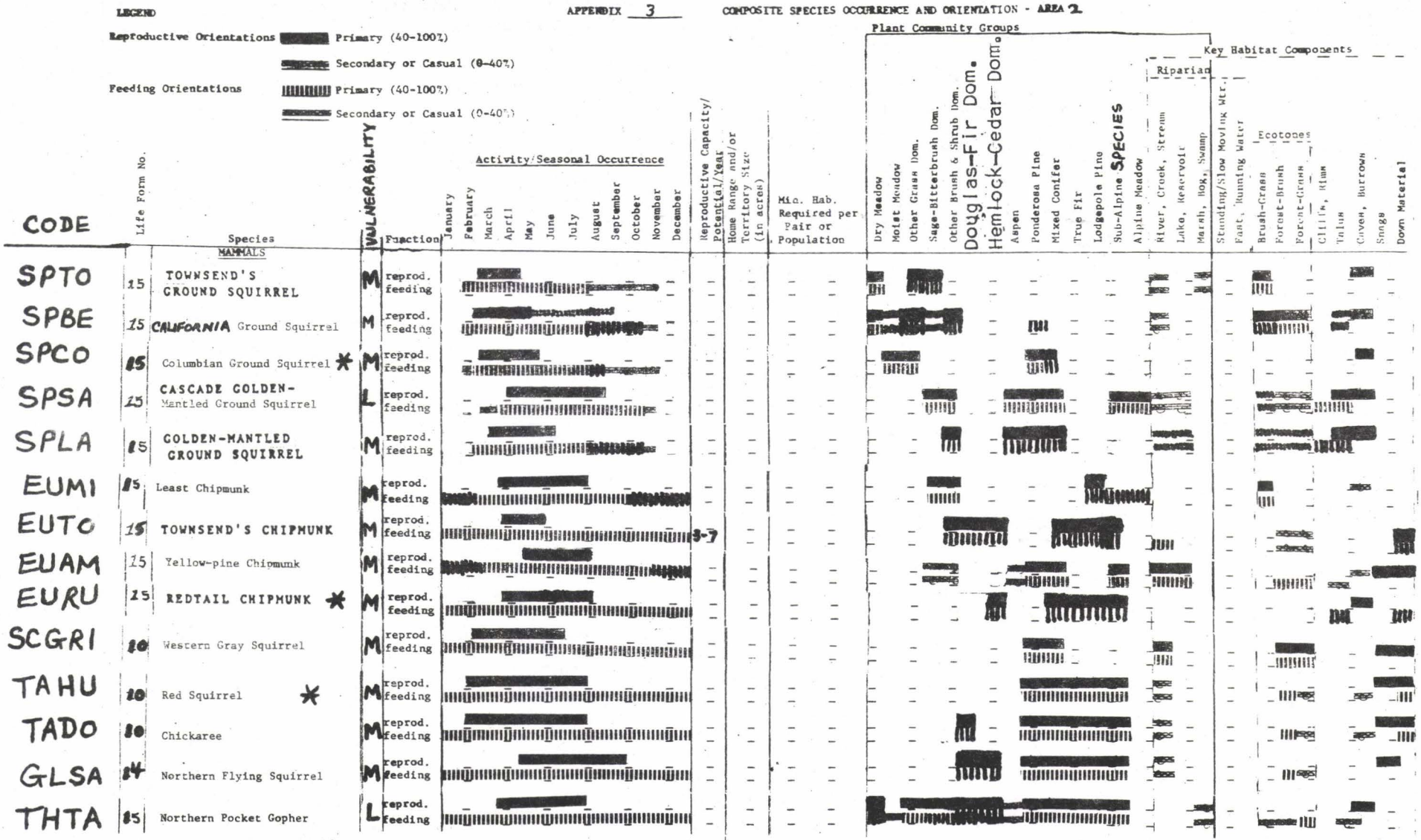
APPENDIX 3 — COMPOSITE SPECIES OCCURRENCE AND ORIENTATION - AREA 2



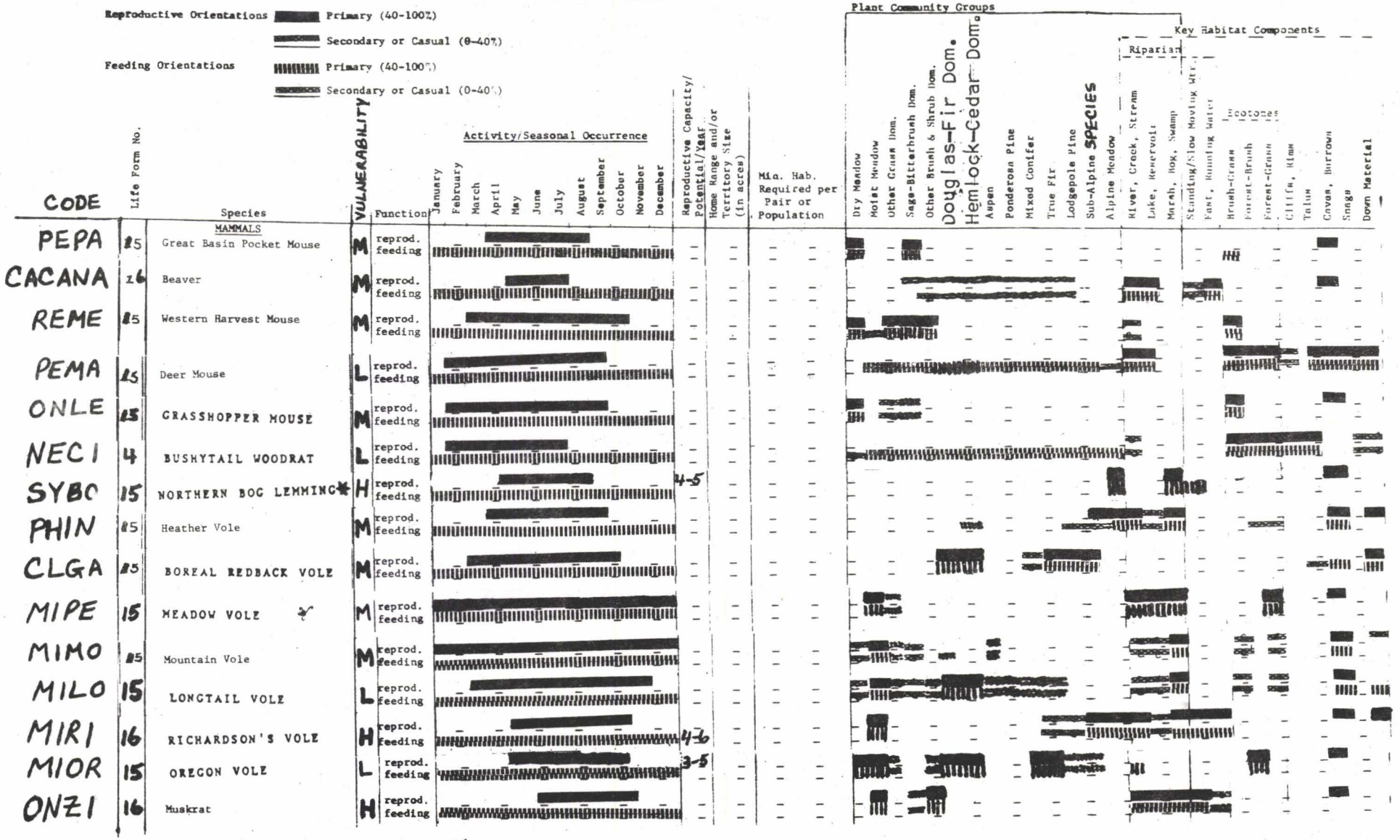
*NOT FOUND ON WENATCHEE N.F.

APPENDIX 3 COMPOSITE SPECIES OCCURRENCE AND ORIENTATION - AREA 2

LEGEND

Reproductive Orientations: Primary (40-100%); Secondary or Casual (0-40%)

Feeding Orientations: Primary (40-100%); Secondary or Casual (0-40%)



CODE	Life Form No.	Species	VULNERABILITY	Function	Reproductive Capacity/ Potential/Year	Home Range and/or Territory Size (in acres)	Min. Hab. Required per Pair or Population
		MAMMALS					
PEPA	15	Great Basin Pocket Mouse	M	reprod. feeding			
CACANA	16	Beaver	M	reprod. feeding			
REME	15	Western Harvest Mouse	M	reprod. feeding			
PEMA	15	Deer Mouse	L	reprod. feeding			
ONLE	15	GRASSHOPPER MOUSE	M	reprod. feeding			
NECI	4	BUSHYTAIL WOODRAT	L	reprod. feeding			
SYBO	15	NORTHERN BOG LEMMING*	H	reprod. feeding	4-5		
PHIN	15	Heather Vole	M	reprod. feeding			
CLGA	15	BOREAL REDBACK VOLE	M	reprod. feeding			
MIPE	15	MEADOW VOLE	M	reprod. feeding			
MIMO	15	Mountain Vole	M	reprod. feeding			
MILO	15	LONGTAIL VOLE	L	reprod. feeding			
MIRI	16	RICHARDSON'S VOLE	H	reprod. feeding	4-6		
MIOR	15	OREGON VOLE	L	reprod. feeding	3-5		
ONZI	16	Muskrat	H	reprod. feeding			

*NOT FOUND ON WENATCHEE N.F.

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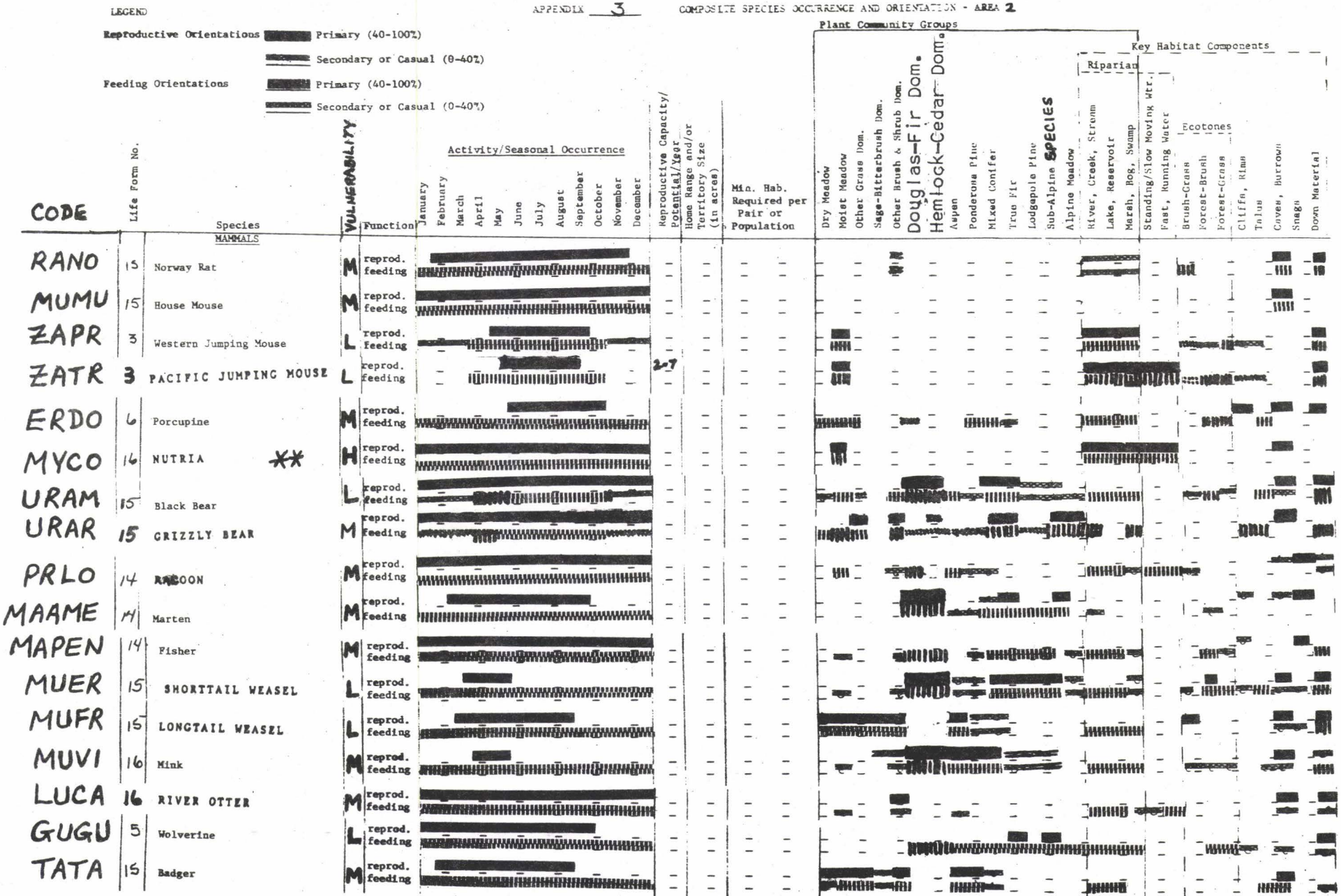
APPENDIX 3 COMPOSITE SPECIES OCCURRENCE AND ORIENTATION - AREA 2

LEGEND

Reproductive Orientations — Primary (40-100%); Secondary or Casual (0-40%)

Feeding Orientations — Primary (40-100%); Secondary or Casual (0-40%)



CODE	Life Form No.	Species	VULNERABILITY	Function	Reproductive Capacity/ Potential/Year	Home Range and/or Territory Size (in acres)	Min. Hab. Required per Pair or Population
		MAMMALS					
RANO	15	Norway Rat	M	reprod. feeding			
MUMU	15	House Mouse	M	reprod. feeding			
ZAPR	3	Western Jumping Mouse	L	reprod. feeding			
ZATR	3	PACIFIC JUMPING MOUSE	L	reprod. feeding	2-7		
ERDO	6	Porcupine	M	reprod. feeding			
MYCO	16	NUTRIA **	H	reprod. feeding			
URAM	15	Black Bear	L	reprod. feeding			
URAR	15	GRIZZLY BEAR	M	reprod. feeding			
PRLO	14	RACCOON	M	reprod. feeding			
MAAME	14	Marten	M	reprod. feeding			
MAPEN	14	Fisher	M	reprod. feeding			
MUER	15	SHORTTAIL WEASEL	L	reprod. feeding			
MUFR	15	LONGTAIL WEASEL	L	reprod. feeding			
MUVI	16	Mink	M	reprod. feeding			
LUCA	16	RIVER OTTER	M	reprod. feeding			
GUGU	5	Wolverine	L	reprod. feeding			
TATA	15	Badger	M	reprod. feeding			

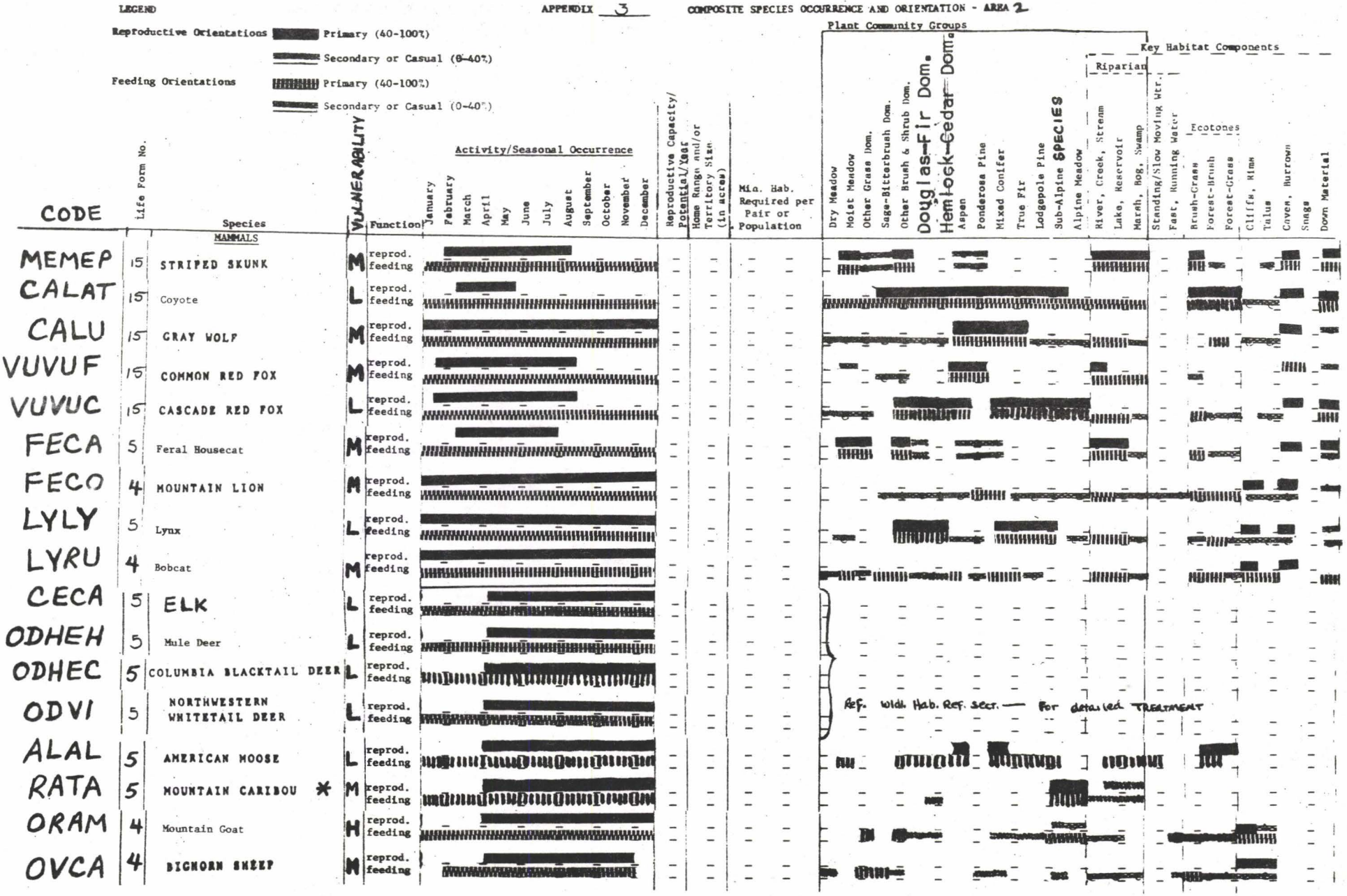
** FOUND ON WENATCHEE N.F.

APPENDIX 3 — COMPOSITE SPECIES OCCURRENCE AND ORIENTATION - AREA 2

LEGEND

Reproductive Orientations: Primary (40-100%); Secondary or Casual (0-40%)

Feeding Orientations: Primary (40-100%); Secondary or Casual (0-40%)



CODE	Life Form No.	Species	VULNERABILITY	Function
		MAMMALS		
MEMEP	15	STRIPED SKUNK	M	reprod. feeding
CALAT	15	Coyote	L	reprod. feeding
CALU	15	GRAY WOLF	M	reprod. feeding
VUVUF	15	COMMON RED FOX	M	reprod. feeding
VUVUC	15	CASCADE RED FOX	L	reprod. feeding
FECA	5	Feral Housecat	M	reprod. feeding
FECO	4	MOUNTAIN LION	M	reprod. feeding
LYLY	5	Lynx	L	reprod. feeding
LYRU	4	Bobcat	M	reprod. feeding
CECA	5	ELK	L	reprod. feeding
ODHEH	5	Mule Deer	L	reprod. feeding
ODHEC	5	COLUMBIA BLACKTAIL DEER	L	reprod. feeding
ODVI	5	NORTHWESTERN WHITETAIL DEER	L	reprod. feeding
ALAL	5	AMERICAN MOOSE	L	reprod. feeding
RATA	5	MOUNTAIN CARIBOU *	M	reprod. feeding
ORAM	4	Mountain Goat	H	reprod. feeding
OVCA	4	BIGHORN SHEEP	M	reprod. feeding

Ref. Wildl. Hab. Ref. Sect. — For detailed TREATMENT

* NOT FOUND ON WENATCHEE N.F.

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TITLE

Wildlife Habitat Relationships
of Eastern Washington (Area 2)

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